

Abstracts - USICON 2016

PRIZE PAPER SESSIONS

CKP MENON BEST PAPER AWARD

CKP 01

A prospective observational study to find the impact of non tumor bearing renal parenchyma on global renal function in tumor nephrectomy patients

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Category: Basic Sciences

Introduction: Radical nephrectomy leads to decrease in global renal functions. Aim was to find histopathological factors in non tumor bearing renal parenchyma that can help in predicting the decline in global renal function. We would also study association of other factors like diabetes (DM) and hypertension (HTN) with decline in renal function and on non tumor parenchyma. **Methods:** Prospectively we collected data of 73 patients undergoing tumor nephrectomy from period December-2013 to January-2015. Non tumor parenchyma of the specimen was reported by histopathologist using periodic-acid Schiff stain. The histopathological factors evaluated were arteriosclerosis (AS) and arteriolar hyalinosis (AH), glomerulosclerosis (GS) and interstitial fibrosis/tubular atrophy (IF/TA). eGFR (estimated glomerular filtration rate) was calculated using Cockcroft-Gault formula before the surgery and at last follow up of at least 6 months. Percent change in renal function was calculated as difference between preoperative eGFR and post operative eGFR/preoperative eGFR X 100. **Result:** Mean follow up was 8.3 months. The mean decrease in eGFR was 22% (p = 0.0001). Percent decrease in eGFR did not show association with any of the histopathological parameters. DM was significantly associated with decrease in percent eGFR (p < 0.05) and increase in AH (p = 0.004), GS (p = 0.03) and IF/TA (p = 0.0001). Maximum size of the tumor showed a negative correlation with percentage change in eGFR (p = 0.028). **Conclusion:** None of the histological parameters showed a significant association with percent eGFR change over a short follow up. Patients with DM showed significant decrease in renal function and change in non tumor parenchyma. Patient with small tumors and DM would benefit from nephron sparing surgeries to preserve global renal function.

CKP 02

In-vitro Study to determine the effect of tadalafil on human ureter: A basic research

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Category: Basic Sciences

Introduction and Objectives: Basic science research studies are commonly performed on animal models which may not be directly applicable to human subjects. PDE 5 inhibitors are known to cause smooth muscle relaxation through cyclic GMP and cyclic AMP mediated pathways. The aim of our study is to assess the relaxant effect of tadalafil on human ureteric smooth muscles. **Materials and Methods:** Eight human upper and middle ureteric specimens were studied in organ bath medium. After stimulation of ureter with KCl ureters were tested with various dose concentrations of Tadalafil. Contractility of the ureter was assessed by the frequency, amplitude and area under contractile curve (AUCC). **Results:** All ureters were responsive to KCl. With 20 micromole concentration there was significant reduction in mean amplitude, frequency and AUCC noted with p values of 0, 0.026, 0.008 and 0.008 respectively. Also with 40 micromole of tadalafil there was significant reduction in

frequency, amplitude and AUCC (p values were 0.008, 0.016 and 0.008 respectively). There was no significant excessive relaxation of ureter by increasing concentration from 20 to 40 micromole (p values were 0.05, 0.172 and 0.115 respectively). **Conclusion:** Tadalafil causes relaxation of the human ureter. Hence it can be used for medical expulsive therapy in ureteric calculi. But there was no corresponding relaxation of ureter by increasing dose of Tadalafil. Thus, increasing the dose may not provide additional benefit.

CKP 03

Are urologists getting French-fried? Discrepancy between the label advertised and actual sizes of endoscopic urological materials

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Category: Endourology

Introduction: In 19th century, Joseph-Frédéric-Benoît Charrière developed a uniform, standard gauge for catheters and medical instruments. Urethral stricture disease was at heart of inception of modern French scale. Our aim was to study if we measure our endoscopic urologic equipment, would the actual measurements be equivalent to the labeled advertised sizes. **Methods:** Some state French unit = circumference in millimeters. Other state French unit = 1/3 of a millimeter in diameter. We analyzed three different instruments, 26 Fr TURP sheath, elliptical 20 Fr cystoscopy sheath and 6/7.5 rigid ureteroscope. Digital caliper was used to make at least 30 measurements of diameter and 30 of circumference at proximal, mid, distal part. The accuracy was 0.01 mm. Size of instrument was derived by using diameter and circumference. **Results:** By diameter, the actual size of the 26 Fr sheath is 27 Fr. 20 Fr sheath at narrow portion was 6.09 mm/18 Fr and wide portion 7.96 mm/24 Fr. 6/7.5 Ureteroscope, at distal end was 6.75 to 9.22 Fr. The proximal portion was 3.52 mm = 10 Fr. By circumference, the 26 Fr sheath measured over 27 French. The 20 Fr would be closer to 23 Fr. The 6/7.5 Ureteroscope was 9.33-12 French. **Conclusion:** The sizes of our endoscopic instruments are larger than labeled size. The circular 26 Fr TURP sheath was 27 Fr. The 20 Fr sheath is over 22 Fr, and the 6/7.5 Fr ureteroscope is actually 9/12. There are clinical implications. Urologists would be wise to be familiarize with the actual size prior to making clinical decisions.

CKP 04

Role and efficacy of GeneXpert MTB/RIF PCR assay in the diagnosis of urinary tuberculosis

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Category: Infections

Aims and objectives: To study the accuracy of GeneXpert MTB/RIF PCR assay in reference to a composite gold standard including urine culture, imaging, and biopsy for the diagnosis of urinary tuberculosis. To compare the accuracy of GeneXpert MTB/RIF PCR assay with that of smear microscopy. **Materials and Methods:** This prospective study of accuracy of a diagnostic test was conducted at a tertiary care centre from March, 2014 to February, 2015; included all adult patients suspected to have tuberculosis of the urinary tract. Three urine samples were collected from each patient. The first early morning, first void sample was subjected to analysis by Xpert MTB/RIF assay, quantitative AFB microscopy, and liquid media (Bactec MGIT 960). The second first void urine and one spot sample were subjected to microscopy only. Radiological imaging, endoscopy and tissue biopsy were performed as clinically indicated. **Results:** The Xpert Mtb/Rif PCR test was found

to have a high specificity (100%) but moderate sensitivity (64.1%) with reference to the composite reference standard. The sensitivity with respect to the liquid AFB culture MGIT 960 is however 90% with 100% specificity. XpertPCR assay is far superior as an initial test for urinary tuberculosis (sensitivity of 64.1% vs 33.1%) compared to the best current available LED fluorescent smear microscopy on serial specimens. Conclusion: Xpert PCR assay on an early morning first void urine specimen should replace smear microscopy as the initial diagnostic test for urinary tuberculosis.

CKP 05

PU AU ratio in the evaluation of success following PUV ablation

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Category: Paediatric Urology

Aim: To assess posterior urethra/anterior urethra ratio (PAR) in neonates and children with posterior urethral valve and assess their values in predicting successful PUV ablation. **Methods:** All neonates and infants with confirmed PUV on VCUG were included. Initial PAR was computed by dividing maximum posterior urethra diameter by anterior urethra diameter. Distances were measured by on screen distance measurement tool in radiology assessment. All patients underwent cystoscopy and PUV ablation using coldknife. Postop VCUG and PAR assessment was performed at 3 months followup. All patients underwent repeat cystoscopy to correlate findings. **Results:** A total of 39 patients (mean age 15 days; range 3-250 days) were analysed between 2013 and 2015. The mean preop PAR was 3.02 (0.75) at the time of diagnosis of PUV. In those with successful PUV ablation on check cystoscopy (n = 35) the mean PAR was 1.3 (0.46) while in those with residual PUV/stricture (n = 4) the mean PAR was 2.9 (1.14). The difference between these two groups were statistically significant (p = 0.0001). Applying the value of mean +2 s.d of successful PUV ablation, a value of PAR >2 was proposed to predict failure. Using this cutoff, 4/7 with PAR >2 had confirmed failure while all with PAR <2 had successful resolution (p = 0.0004). **Conclusion:** Whenever the posterior urethra is more than double the diameter of anterior urethra (PAR >2) on repeat VCUG following a PUV ablation, check cystoscopy is essential to rule out residual PUV/stricture.

CKP 06

Quality of life in renal transplant recipients

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Category: Renal Transplantation & Vascular Surgery

Introduction and Objective: The purpose is to study the quality of life (QOL) in renal transplant recipients, emphasizing on Physical, Psychological, Social Relationships and Environment issues and to compare the same among recipients who received kidney from live donor and deceased donor. **Methods:** Renal transplant recipients between December 2012 and December 2014 were included in the study. They were investigated for deteriorated renal function and were instructed to answer WHOQOL-BREF questionnaire. Two such questionnaires were obtained from patients, one concerning their life before surgery, the other concerning their life after surgery. Paired t-test was used to compare the difference between the mean scores of different domains of WHOQOL-BREF questionnaire and independent T test was used to compare the mean difference between live and deceased kidney recipients. **Results:** Total of 87 recipients, 59 live renal recipients and 28 deceased renal recipients participated in our study. The mean duration of follow up was 14 months. Analyzing WHOQOL-BREF scores, there were statistically significant (p < 0.05) increase in QOL scores in Physical, Psychological, Social Relationships and Environment domain. Among live and deceased renal recipients although there was significant delayed graft function in deceased kidney recipients during immediate post operative period, the graft function and QOL scores were statistically comparable thereafter. **Conclusions:** The positive impact of renal transplant surgery in changing the perception of life is proved again here as our results indicated global increase in QOL scores. Further the results are encouraging us to continue deceased renal transplants and we campaign for organ donation.

CKP 07

Association of PI-RADS scoring with prostate cancer detection and Gleason score in magnetic resonance imaging-transrectal ultrasound fusion biopsy

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Category: Uro Oncology

Introduction: Prostate cancer is one of the five leading cancers among males in the most of registries in India. Transrectal rectal ultrasound (TRUS) systematic biopsy is the gold standard for diagnose of prostate cancer. However, systematic biopsy has high false negative rate and often misses anteriorly located tumour. Magnetic resonance imaging (MRI)-TRUS fusion biopsy can potentially improve cancer detection by better visualization and targeting of cancer focus. We evaluated association of Prostate Imaging Reporting and Data System (PI-RADS) score of multiparametric MRI for predicting cancer risk and its aggression (Gleason score). **Materials and Methods:** 108 patients with suspected prostate cancer were studied from may 2014 to july 2015. All patients were first underwent 3.0 T MRI before biopsy. PI-RADS score was given to each suspicious lesion. Subsequently MRI-TRUS fusion targeted biopsy of suspicious lesions and standard 12 core biopsy were performed. **Results:** Mean age was 64.2 (43-79) years and median PSA was 9.3 (4-150) ng/ml. Targeted biopsy detected 43.93% cancerous cores and standard 12 core biopsy detected 16.89% cancerous core (p value = 0.000). Prostate cancer detected in 0%, 33.33%, 69.04% and 88.57% of suspicious lesions of PI-RADS score 2, 3, 4 and 5 respectively. Gleason score >7 was presented in 44.83%, 79.31% and 93.55% in positive cancer lesions with PI-RADS score 3, 4 and 5 respectively (chi-square test = 28.3, p = 0.000). **Conclusions:** MRI-TRUS fusion targeted biopsy detects more clinically significant cancer (Gleason >7). There is statistically significant association between PI-RADS scoring of suspicious lesions and detection of prostate cancer and its aggressiveness.

CKP 08

Status of miR-2909 and urothelial carcinoma associated-1 gene in urine of patients with carcinoma urinary bladder

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Introduction and Objectives: To evaluate the role of miR-2909 and UCA-1 gene (micro RNA's) as a urinary marker in patients with urothelial carcinoma urinary bladder (CaUB). **MATERIAL AND Methods:** Patients of CaUB, with no prior treatment, no other malignancy, and normal renal function were prospectively enrolled. Six age matched healthy subjects and 10 patients with adenocarcinoma prostate (CaP) served as normal & diseased controls respectively. Freshly voided urine samples were collected for estimation of miR-2909 and UCA-1 using RT-PCR. Repeat estimation of urinary miR-2909 & UCA-1 were done three months of definitive treatment. **Results:** miR-2909 was not expressed in urine of any of 25 patients with CaUB (22 male, 3 female). UCA-1 expression was detected in urine of all the patients (range: 2.23-10.99; mean = 5.20 ± 2.19 folds). UCA-1 levels were not related to the stage (p - 0.652) and grade (p - 0.502) of CaUB. After 3 months of treatment, 20 patients did not have any expression of UCA-1. In remaining 2, UCA-1 expression dropped significantly from 5.5 to 1.5 & 6.52 to 1.23 folds respectively. In normal controls both miR-2909 & UCA-1 were not expressed. In patients with CaP, both miR-2909 and UCA-1 were expressed and ranged from 2.2-12.2 (mean = 4.59 ± 3.34) and 2.08-10.53 (mean = 5.30 ± 3.32) folds respectively. **Conclusions:** UCA-1 gene is not a specific urinary marker of CaUB as it is also expressed in CaP. UCA-1 expression is not related to stage and grade of CaUB. It may serve as urinary marker in follow up. miR-2909 need to be evaluated further as an urinary marker in CaP.

CKP 09

An assessment of serum testosterone, serum estrogen, Vitamin D and bone mineral density in adult idiopathic calcigerous renal stone formers

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Category: Urolithiasis

Introduction and Objectives: Recurrence and gender disparity are known in idiopathic renal calcium stone disease (RSD). Sex hormones and bone mineral density (BMD) may be contributory to it as suggested by animal models. **Materials and Methods:** Hundred male and 50 female idiopathic non-CKD patients with RSD were enrolled as cases. Healthy age matched 25 males and 25 females served as controls. Morning blood-sample was analysed for serum testosterone and estrogen. Serum vitamin D3 and parathormone assessed by electrochemoluminance immunoassay. BMD of lumbar vertebrae was assessed using hological DEXA scan. **Results:** Subgroups consisted of males, premenopausal females and postmenopausal females. Cases and controls were comparable for age and BMI. Serum testosterone was significantly higher in men with RSD vs controls (17.87 ± 4.84 nmol/l vs 14.84 ± 5.4 nmol/l, $p = 0.007$). For value >16.4 nmol/l odds ratio (OR) for stone formation was 2.73. Serum estrogen to serum testosterone (S.E/S.T) ratio was significantly lower in men with RSD vs controls (2.62 ± 1.26 vs 3.58 ± 1.84 , $p = 0.003$). For value >3.24 OR for stone formation was 0.639. Sex hormones in women with RSD were not significantly different as compared to controls. Vitamin D3 was lower among RSD vs control (12.7 ± 9.8 ng/ml vs 14.5 ± 7.5 ng/ml, $p = 0.239$, not significant). T score lumbar vertebrae was significantly lower in stone formers (-1.44 vs -1.02 , $p = 0.012$) especially in premenopausal female stone formers (-1.26 vs -0.66 , $p = 0.029$). For value <-1.25 OR for stone formation was 4.89. **Conclusion:** Men with higher serum testosterone and lower S.E/S.T ratio are at 2.7 to 3 fold higher risk for RSD. Stone formers have lower BMD especially premenopausal females. A strategy to alter the S.E/S.T in men and maintaining BMD in general may help preventing stone formation and recurrence.

BRIJ KISHORE PATNA PRIZE PAPERS

BKP 01

Transplant renal artery stenosis: The impact of endovascular management and their outcomes

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Introduction and Objective: Transplant renal artery stenosis (TRAS) is well known vascular complication of renal transplantation. The aim of this analysis was to assess the safety and efficacy of Endovascular therapy to salvage transplant kidney. **Methods:** We retrospectively analyzed our transplant database from January 1994 to January 2015. 24 patients presented with TRAS. The primary end point was stenosis free primary transplant renal artery patency. Secondary end points were freedom from re-intervention, graft survival, post operative serum creatinine level, and the number of antihypertensive drugs pre and post procedure. **Demographics, perioperative data, and transplant function outcomes** were extracted and analyzed. **Results:** Incidence of TRAS in our study was 5.06. Transluminal angioplasty with and without stenting was done in 24 patients with significant transplant renal artery stenosis. The mean age was 59 years (range 36-78 years). The indications for intervention included renovascular hypertension or worsening renal function with raised serum creatinine. There were no periprocedural deaths. During follow up one patient developed restenosis within 5 months (4.2%). Renal functions was improved in 95.8% of patients. Need of Anti-hypertensive medications after the procedure was reduced (mean 2.9 to 2) at 6 months follow up. **Conclusion:** Percutaneous transluminal angioplasty with stenting is well established technique and is also the initial intervention of choice. The study analysis proved high clinical success with improvement in overall transplant renal function and renovascular hypertension in short and midterm follow up.

BKP 02

Efficacy of tamsulosin in persistent obstructive voiding symptoms after transurethral surgery of prostate: A double blind placebo-controlled prospective study

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Introduction: Persistent Obstructive Voiding Symptoms after TURP is a common problem. There is no accepted definitive medicinal treatment for obstructive symptoms after transurethral resection/vaporization of prostate. Urologists, surgeons and physicians keep on prescribing different alpha-blockers without knowing the efficacy of such treatment on an operated prostate. Literature is absolutely silent on this issue. Hence, to resolve this controversy, we designed this prospective study in a very objective fashion to find out if Tamsulosin is effective in relieving post-TURP Obstructive Symptoms. **Materials and Methods:** 80 patients having obstructive voiding symptoms even after 3 months of TURP/TUREVP Laser TURP were taken as source data for this Randomized Double Blind Placebo-controlled study. **Results:** The patients were evaluated before and 6-weeks after giving the treatment with Tamsulosin using subjective (IPSS) and objective (USG, UROFLOWMETRY) parameters. On USG for residual urine, the improvement in mean value of Tamsulosin Group is 20 ml (43.79%) and improvement in mean value of placebo group is 4 ml (10.46%). The improvement of Qmax is 2 ml (13.20%) in Tamsulosin group and less than 1 ml (1.44%) in placebo group. The improvement in Avg flow was 1 ml (15.08%) in Tamsulosin group and less than 1 ml (4.81%) in placebo group. On statistical analysis, we found significant improvement in Uroflowmetry data (Qmax and Avg flow) in patients on Tamsulosin as compared to placebo. IPSS scoring and QoL improvement were significantly better in the Tamsulosin group as compared to placebo group. **Conclusions:** Persistent obstructive voiding symptoms after transurethral surgery for BPH do respond to alpha-blocker. Tamsulosin (0.4 mg) is an effective drug in relieving persistent obstructive symptoms after transurethral surgery of BPH. **Key-words:** BPH, IPSS scoring, post-TURP symptoms, tamsulosin, uroflowmetry

BKP 03

Functional outcome determinants of palliative transurethral resection of prostate in locally advanced and metastatic prostate cancer: A prospective study

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Objectives: To assess prospectively the efficacy and clinical determinants of poor functional outcome among patients of locally advanced and metastatic prostate cancer undergoing palliative transurethral resection of prostate (pTURP) for Bladder outlet obstruction. **Methods:** Total 112 patients of locally advanced and metastatic prostate cancer requiring pTURP were evaluated for International Prostatic Symptom Score (IPSS), Quality of Life (IPSS QoL), maximum urinary flow rate (Qmax), Voided Volume (VV) and Post voided residual volume (PVR) before and at 6 months after treatment. The criteria for poor functional outcome was defined as decrease in IPSS $<50\%$, increase in Qmax $<30\%$ and incontinence post-operatively. **Results:** A significant decrease in IPSS (-60.15% , $p < 0.05$) and increase in IPSS QoL ($+74.73\%$, $p < 0.05$) was observed following treatment. A significant increase in Qmax, VV and decrease in PVR was also observed ($+59.17\%$, $p < 0.05$), ($+26.03\%$, $p < 0.05$) and (-61.61% , $p < 0.05$) respectively. As a secondary outcome, 4 factors associated significantly ($p < 0.05$) with poor functional outcome ($n = 20$): Time interval between diagnosis of prostate cancer and pTURP (>8 mo), Gleason score (>7) and PSA at time of initial diagnosis (>150 ng/ml) and surgery (>22 ng/ml). There was no statistical significance of age, trigger of operation, treatment modality, prostate volume, operative time, resection weight and hospital stay with poor functional outcome. **Conclusions:** It's a unique prospective study emphasizing pTURP as effective procedure in both subjective and objective parameters. Poor functional outcome (17.86%) of surgery is associated with time interval between diagnosis of prostate cancer and pTURP, Gleason score, PSA at time of initial diagnosis and at time of surgery.

BKP 04

Carcinoma prostate and bone health: An indian prospective

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Introduction: Carcinoma prostate (CaP) patients with skeletal metastases, ADT and co-existing osteoporosis have more bone complications. In this study we evaluate the bone health in the management of CaP patients. **Materials and Methods:** A prospective observational study was performed in 101 patients of CaP, (hormone naïve or on ADT). The bone density was measured with DEXA Scan at lumbar spine, left/right femur neck at 1st visit, 3rd and 6th month. Patients with negative T-Score were started on Zolendronic acid (Zol) or Denosumab (D). **Results:** Out of 47 patients started on Zol, 27 (57.5%) were significantly improved and showed positive change in BMD plus improvement in T-score ($p < 0.05$) with increment of 4.32% over 6 months. Five patients with borderline renal function at 3rd month were shifted to D. Also, 15 patients did not improve at 3rd month were shifted to D. Out of these 20 patients on D, 16 patients showed improvement in BMD though p value was not significant. 39 patients were started on D as 1st treatment modality and showed significant improvement ($p < 0.05$). Out of 15 patients who had high baseline BMD, 11 showed positive change with just calcium and vitamin D supplementation at 3 and 6 month BMD measurements. Four patients were started on Zol at 3rd month. **Conclusion:** There is need for urologists to sensitize regarding bone health kinetics and early preventive or curative measures. Thus in turn prevent fractures and other skeletal related events in this group of population.

BKP 05

Evaluation of revised (2007) Partin's nomogram in an indian cohort: Discrimination and calibration properties

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Introduction: Partin's nomogram is an important prognostic tool to predict adverse pathological features for clinically localized prostate carcinoma. This tool is widely used by both radiation and surgical oncologists for pre-intervention counseling and need for adjuvant treatment. However, this model is based on the population having predominantly low risk disease. This study was conducted to assess the performance of revised (2007) Partin's nomogram as applied to Indian population by assessing the discrimination and calibration properties on an Indian cohort. **Methods:** Retrospective review of 282 patients undergoing robotic radical prostatectomy from 2010 to 2015. Revised Partin tables used to calculate the predicted probabilities for Lymph node invasion (LNI), Seminal vesicle invasion (SVI), and extraprostatic extension (EPE). The discrimination properties were assessed using the ROC curves. Calibration of the model was done to show the relationship between predicted and observed values. **Results:** The mean age was 64.3 years. Most (59.4%) were stage 2. Patients with PSA >10 ng/ml comprised 60%. ECE, SVI and LNI were present in 39.2%, 22% and 11% of cases respectively. ROC analysis revealed AUC (area under curve) values for EPE, SVI and LNI of 68%, 67.5% and 71.2% respectively. The Partin tables under-predicted the risk whenever the values of predicted risk were more than 26%, 3% and 1% for EPE, SVI and LNI respectively and over predicted when the risk was lower. **Conclusions:** Our data show that Partin's tables, despite having fair discrimination properties, do not accurately predict LNI, SVI and ECE across the entire range of predicted values due to the drastic differences from the population of original cohort.

BKP 06

Selective indication for check cystogram before catheter removal following robot assisted radical prostatectomy

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Introduction: With the improvement in anastomotic technique, it is rare to find anastomotic site leak after RARP. It may not always be necessary to do regular check cystogram. We evaluated our 230 consecutive RARP patients and their cystogram, in order to determine indications for selective use of cystogram prior to catheter removal. **Materials and Methods:** Characteristic noted: age, Biopsy Gleason, clinical stage, and history of TURP or bladder neck surgery. Urethrovaginal anastomosis was done in 2 layers (with bladder

neck reconstruction, if needed). Cystography was done, at low pressure and observed under fluoroscopy for any contrast leak. **Results:** 207 patients (90%) underwent catheter removal on postoperative day 7. Nine patients (3.9%) had extravasation on initial cystogram. Two patients with leak had history of TURP and seven other had bladder neck reconstruction for wide bladder neck. 3 patients with minimal leak, did not require catheter replacement. In rest of 6 patient with leak, continued catheter drainage was done. No significant difference in the intraoperative variables, blood loss, and duration of drain, length of hospital stay and continence outcomes was noted between patients with Leak compared to rest of patients. None of the patient needed any procedure/intervention related to surgery. None of the patient developed bladder neck stenosis. **Conclusion:** In usual circumstances, catheter removal can be done safely on postoperative day 7 without routine cystography. Selective use of check cystogram can be done in case where bladder neck reconstruction is done, history of TURP with wide bladder neck.

DR S S BAPAT PRIZE PAPER FOR INNOVATIONS IN UROLOGY

INT 01

Construction and assessment of an innovative virtual fluoroscopy PCNL simulator: An indigenous approach to training

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Introduction: PCNL has a significant learning curve. Commercial simulators have prohibitive pitfalls. We describe our innovative virtual fluoroscopy PCNL simulator. **Methods:** A portable virtual fluoroscopy PCNL simulator was designed (using CAD), patented and constructed. Evaluation using a 3 step test, GRS performance score and trainee feedback form, was done. **Results:** Trainees demonstrated statistically significant improvement in GRS scores, total time, fluoroscopic time and attempted needle punctures after training ($p < 0.001$). **Conclusions:** Our innovative portable virtual fluoroscopy PCNL simulator uses visible light to reproduce fluoroscopy images. The usual puncture needle with any access technique can be used. It replicates respiratory movements. The alarm allows trainee evaluation and supervised, repetitive tailored learning in a controlled, low stress environment. It has a low initial and maintenance cost and serves as a satisfactory initial puncture practice station. Such virtual fluoroscopy simulators would open up newer avenues in PCNL simulation

INT 02

Innovations and ideas to overcome difficulty during RIRS

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Aim: Innovations and ideas to overcome difficulty during RIRS. There are many options for the treatment of less than 2 cm renal and upper ureteric calculi, viz ESWL, RIRS, Mini PCNL, PCNL etc. There are various advantages and disadvantages of each technique. With the advancement in technology to miniaturizing the instrumentation, RIRS is increasingly being used for these stones, albeit with some difficulties. We here by present certain practical problems faced by a urologist during procedure and show how to overcome them.

INT 03

"Orthotopic Ureteric Meatoplasty" novel technique for repair of vesicovaginal fistula involving ureteric orifice; our experience

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Introduction: Vesico-vaginal fistulae (VVF) involving ureteric orifice (UO) remain one of the most challenging problems in modern female urology. Ureteric reimplantation warrant additional operative time, morbidity

and risk of complication. We present a multicenter experience of our technique "orthotopic ureteric meatoplasty", which end the need of ureteric reimplantation, it is rapid, easy and very effective technique without concern of ureteric obstruction and leak. Materials and Methods: From July 2012 to March 2015, 36 cases (age range 26–60 years) with VVF involving UO (ureteric orifice within 5 mm of distance from fistula margin) were repaired at five urological centers with orthotopic ureteric meatoplasty technique by different Urologist. The fistula was approached transabdominally. The bladder was opened vertically to get maximum exposure. Ureteric catheter inserted into bilateral ureteric orifices, orthotopic ureteral meatotomy done by incising anterior submucosal ureteric tunnel for about 1 cm from native position along the direction of Ureter. Meatoplasty applying three tacking sutures at ureteric mucosa and bladder margin done after putting feeding tube. The vaginal defect was closed, then a flap using the isolated omentum was interposed and fixed between the vagina and bladder. With above method we avoided reimplantation in all cases. Results: In all cases closure of the fistula was achieved, and follow up ultrasound and IVP does not demonstrate any patient with obstructive features. Conclusion: In our experience, orthotopic ureteric meatoplasty technique has been successful in most cases and we recommend this technique for repair of VVF involving ureteric orifice.

INT 04

Magnet based docking of mobile devices for advanced simulation and basic urological procedures

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Introduction and Objective: Available armamentarium has a huge impact on Laparoscopic and endourologic skills and even patient outcome. The financial constraints of a new urologist often come in the way of skill acquisition and practice of basic urological procedures. With advances in technology and miniaturization of equipment it seems possible to lower the financial barrier and mobile devices have a major projected role in this regard. **Methods:** A custom made set of semicircular neodymium magnets with magnetic flux density of 12,800 gauss and coercive field strength of 12300 oersted was used to dock a mobile device with a help of an outer case to the cystoscope and an indigenous endotrainer to perform various common exercises using a dummy model. Common maneuvers like visualization of the inside of a hollow cavity, passing a guidewire and catheter through an orifice, peg transfer, cutting a circle, needle guidance and suturing were performed with this arrangement. **Results:** All common maneuvers could be practiced and performed easily using the arrangement. Magnet based docking offered freedom to use any mobile device and employ a cystoscope for practicing laparoscopic skills at various angles and views and also independently. The ability to store, audit, monitor and share skills with peers and patients is an unparalleled advantage. **Conclusions:** The present innovation of endotraining using a mobile device is unique as is the ability to use the docking device across any mobile device and platform for basic procedures at the lowest possible costs.

INT 05

Effects of voiding positions on uroflowmetric parameters

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Introduction: Uroflowmetry is the most commonly performed noninvasive test for observing the characteristics of urine flow with voiding in patient's preferred positions like standing in males & sitting among females. **Aim:** Was to observe the effects of different voiding positions on uroflowmetric parameters & to explore the possibility of recommendation of sitting or Prone or both positions instead of standing in patients who are unable to stand sit or stand due to medical reasons like operated patients, physically debilitated patients, elderly in extremes of age, etc. **Materials and Methods:** 100 Male Patients with LUTS in age group of 40-80 years were enrolled in this study. This was prospective Multivariate Comparative study in which over next 2 years same patient's uroflowmetric parameters viz Qmax, Qavg, voided volume, Graphic curve pattern in standing, sitting & Prone voiding positions were compared with each other's and the results were analyzed & compared by using two-tailed test of statistics. **Results:** No significant differences were found in study of standing, sitting & prone positions. Qmax was insignificantly higher in sitting position. **Conclusion:** Since uroflowmetric parameters were not statistically different from each

other in different positions, Prone position can be considered in patients who cannot sit or stand & sitting or Prone or both positions can be used in who are unable to stand sit or stand. This expolation may require more confirmative studies.

INT 06

Complete reconstruction of glans by buccal mucosa in a case of extensive resistant condyloma

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Introduction: Presenting a new technique of complete glans reconstruction in a case of Extensive and resistant warts involving whole of glans and prepuce mucosa. **Case:** 47/m presented with very painful extensive warts of glans of 6 mth duration. Multiple chemical/medical line of treatment had been tried but failed. **Pre op preparation:** Multiple biopsies taken to rule out malignancy. **Methods:** Incision taken separating prepuce mucosa from penile skin. Then complete dermoepidermal excision of glans with complete excision of inner layer of prepuce has been done. Reconstruction of glans has been done with buccal mucosa free graft. Take of graft is very good due to rich vascular bed of glans. Skin is sutured to buccal mucosa just proximal to corona of glans leading to pink glans with penile skin just proximal to corona giving good cosmesis and near normal look. **Discussion:** Warts are well known for recurrence and bad cosmesis. Resistant warts after failed medical line needs surgical excision but still recurrence is high as virus particle resides deep in basal layer of epidermis which remains back. After surgical excision also cosmesis remains bad and prolonged wound healing. To overcome above problems I did complete dermoepidermal excision and complete buccal mucosal reconstruction giving complete cure with good cosmesis. **Results and Conclusion:** this technique has no recurrence till today (9 months) with good cosmesis and preservation of sexual function of glans and psychology of patient.

CHANDIGARH BEST VIDEO SESSION – I

CBVP 01

Microperc armamentarium: Expanding the indications: A video demonstration

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Category: Endourology

Introduction and Objective: Microperc is safe and efficient in the management of small renal calculi (<1.5 cm) in adults. We present a video demonstration wherein we used the microperc armamentarium for other indications as well. **Methods:** The Microperc needle is 4.85 Fr three part needle, onto which a three way adapter is attached. One channel of the adapter helps in introduction of the 0.9 mm fiberoptic telescope, the second for the irrigation source and the third admits miniaturized instruments (laser fiber/forceps). We utilized this armamentarium in varied clinical scenarios - calculi in ectopic kidney, in pediatric renal calculi, for management of lower ureteric calculus (micro-URS), antegrade biopsy of renal pelvic mass and Deflux injection for management of reflux. **Results:** Microperc system was successfully used in the mentioned scenarios, with short hospital stay, no significant complications and no requirement of transfusion. **Conclusion:** Microperc and its accompanying armamentarium, besides being the most minimally invasive modification of percutaneous nephrolithotomy, can also be used efficaciously and safely in the management of above mentioned clinical indications, both calculous and non-calculous. This feasibility video demonstration may serve as a guide for broadening the realms of utilization of microperc armamentarium.

CBVP 02

Robotic excision of right adrenal mass encasing renal vessels with retrocaval extension and abutting the left renal vein

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Category: Laparoscopic Urology

A 17 year old boy presented with right adrenal mass which was encasing renal artery with retrocaval extension and abutting the left renal vein. Patient was placed in right lateral position and 4 arms were utilised. The retroaortic mass was dissected from the interaortocaval region and the retrocaval extension was delivered to the right side. Then branches of renal vessels were dissected out and the mass pulled superior to the renal hilum. The retro left renal part was dissected free subsequently. Then the mass was dissected in the paracaval region and adrenal vein was ligated. Then it was dissected free of the superior pole of the kidney. Mass was extracted through a Pfannenstiel incision and haemostasis attained. Operating time was 345 minutes, console time 290 minutes, blood loss was 250 ml and hospital stay was four days. The pathological examination demonstrated ganglioneuroma.

CBVP 03

Robot assisted ureterocalicostomy for secondary UPJ obstruction: A video demonstration

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Category: Reconstructive Urology

Introduction: In this video we present our experience with robot-assisted laparoscopic repair of secondary ureteropelvic junction obstruction (UPJO) and demonstrate technicalities of repair. **Objective:** To study our experience of robot-assisted laparoscopic repair of secondary ureteropelvic junction obstruction. **Materials and Methods:** 6 cases of secondary UPJO were treated with robot assisted laparoscopic ureterocalicostomy between 2011 and 2015. Video demonstrates surgical technique in an illustrative manner. The da Vinci Si robotic platform with the four arm approach was utilized. The salient features included: (1) Ureteric catheter placement (2) 4 port placement with patient in lateral position. (3) Bowel mobilization (4) Localization of lower calyx by intra-operative ultra sound probe (5) Lower segmental nephrectomy (6) Anastomosis (ureterocalicostomy) with 3-0 V-lock sutures over a pre placed 5F ureteric catheter and drain placement (7) changing of ureteric catheter to DJ-stent on 3rd day post operatively. **Results:** Procedure was completed successfully without any intra operative complications in all cases. Mean operative time was 172 ± 23 minutes and analgesic requirement of 325 ± 40 milligram of tramadol. Urethral catheter was removed on 5th and drain on 6th post-operative day and stent after 6 weeks. Two patients had Clavien's grade I complications (fever) that was managed conservatively. One patient had a grade IIIb complication (worsening renal function and recurrence of obstruction at anastomotic site), which required balloon dilatation and restenting. **Conclusion:** Robot-assisted laparoscopic ureterocalicostomy for secondary UPJO is safe and feasible in expert hands. Apart from short recovery time; robotic approach provides added advantage of technical ease and precision of suturing.

CBVP 04

Robotic dual kidney transplantation

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Category: Renal Transplantation & Vascular Surgery

Introduction: A large incision is required for exposure of the iliac vessels and creating space for seating the two kidneys in dual kidney transplantation. This can lead to wound related morbidity and possibility of lymphocele formation because of extensive skeletonisation of the major vessels. We performed robotic dual kidney transplant to avoid the abovementioned complications and are presenting the video of the same. **Materials and Methods:** Patient was placed in reverse Trendelenburg position after general anaesthesia. Pneumoperitoneum was created. 12 mm camera port was placed above the umbilicus. Robotic 8 mm ports were placed 7-8 cms. laterally from the camera port. A 12 mm assistant port and 8 mm robotic ports were placed 4-5 above the iliac crest on either side respectively. Another 5 mm port was placed. Robot was docked. Common and external iliac vessels were dissected. Vascular anastomosis of the left kidney was done with common iliac and the right kidney with the external iliac using 6-0 Gore-Tex suture. Both ureters were reimplanted with the

modified Lich-Gregoir technique. **Results:** The total operative time was 435 minutes. Anastomotic time for the first and second kidney was 43 minutes and 32 minutes respectively. Estimated blood loss was 300 ml. Slow urine output was established. The nadir creatinine achieved was 1.1 mg% after 3 weeks. **Conclusion:** Robotic dual kidney transplant is safe, feasible, gives good outcome and avoids the morbidities associated with the open transplant.

CBVP 05

Innovative application of instant toggling of endoscope in challenging cases during robot assisted radical prostatectomy using Xi Da-Vinci robotic surgical system

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Category: Uro Oncology

Objective: We will demonstrate the innovative role of instant toggling of endoscope in key steps of nerve sparing (NS), modified posterior reconstruction and vesicourethral anastomosis (VUA) in presence of challenging scenarios during robot assisted radical prostatectomy using Xi da-Vinci Robotic Surgical System. **Materials and Methods:** We have demonstrated the role of instant toggling of endoscope (from 30 down to up) in Xi da-Vinci robotic surgical system during bilateral complete NS in challenging scenarios of RARP has also been highlighted. Further, we demonstrated our technique of modified posterior reconstruction and modified von Volzhen VUA in ideal scenario. Subsequently, we highlighted the role of instant toggling of endoscope (from 30 down to up and vice versa) in Xi da-Vinci robotic surgical system, in presence of challenging scenario of morbidly obese patient with deep and narrow pelvis, during posterior reconstruction and VUA. **Results:** Twenty patients were included in the study from January 2015 to May 2015. Using the instant toggling of endoscope in Xi da-Vinci robotic surgical system, the mean time for NS was 12.3 min (vs. 18.1 min in standard procedure). There were no intraoperative/postoperative complications. The modified posterior reconstruction and VUA could be completed efficiently in all cases. **Conclusions:** The use of instant toggling of endoscope using Xi da-Vinci robotic surgical system during RARP is feasible and safe. It improves visualization of anatomical landmarks and quality of NS. It also facilitates other key steps of modified posterior reconstruction and VUA in challenging scenario - obese patient, with deep narrow pelvis

CBVP 06

Robotic partial nephrectomy: Resection of a difficult hilar renal tumour using Da Vinci XI system

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Category: Uro Oncology

Introduction: Partial nephrectomy for hilar tumour is a real challenge. Even though laparoscopic partial nephrectomy is a well accepted procedure, it could not get full acceptance because of unpredictability of the complications associated with difficult tumours. Degree of difficulty has been assessed with different scoring system to assess the difficulty and plan the surgery. Robotic partial nephrectomy has made the procedure more acceptable. The video is presented to demonstrate how partial nephrectomy can be considered for difficult hilar tumours with the help of robot. **Materials and Methods:** 61 year old gentleman presented with 5.3 cm hilar tumour which was incidentally detected on USG. The mass was in upper pole, abutting the main renal vessels and hilar in position with a nephrometry score of 8 Ph. Patient wanted to avoid an open surgery if possible and as advised a robot assisted lap partial nephrectomy. 4 ports were used for robotic arms and a 12 mm port was used for assisting. **Results:** Even though the tumour was abutting the main renal vessels and extending into the hilum, the partial nephrectomy could be completed with minimal blood loss (Less than 50 ml). The 3D vision and the extended dexterity of the robotic arm made the surgery possible which could have been difficult with an open approach. **Conclusion:** Partial nephrectomy for difficult small renal masses is made easy with Robot.

CHANDIGARH BEST VIDEO SESSION – II

CBVP 07

Procept aqua beam: An innovative waterjet resection technique for treatment of benign prostatic hyperplasia: Video presentation

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Category: Benign Prostatic Hyperplasia

Introduction: Procept aqua beam system TM is a robotic arm that delivers high-pressure water jet to prostate under precise electromechanical control under Transrectal USG. The water jet selectively cuts prostatic glandular tissue and can be used for treatment of bladder outlet obstruction. **Objective:** To assess the effectiveness of water jet resection for treatment of benign prostatic hyperplasia. **Materials and Methods:** 64 years old hypertensive male presented with voiding lower urinary tract symptoms for 4 years and was diagnosed to have bladder outlet obstruction and a prostate size of 56 cc. **Point of technique:** In lithotomy position trans rectal ultrasonography (TRUS) is done. Prostate size and contour is assessed and same parameters transferred to conformal planning unit. Cystoscopy is done. TRUS and Handpiece are aligned. Final setting of Contour of resection of prostate is done. Now high pressure saline is delivered through handpiece. At the end of procedure cystoscopy is done to check adequacy of resection and bleeding. Bleeding point may be coagulated using a bugbee electrode if required. **Results:** We did 20 aqua ablation cases last year. Average aqua ablation time was around 2 minutes. Hemoglobin drop was 1.2 ± 0.24 and 0.24 ± 0.43 respectively. **Conclusion:** Procept aqua beam waterjetTM resection technique for prostate is an effective technique for prostate resection with results comparable to other methods of transurethral prostatic resection. The dysuria score is significantly less and incidence of retrograde ejaculation may decrease substantially.

CBVP 08

Complete penoscrotal transposition with hypoplastic penis managed by radial forearm free flap phalloplasty: A rare case report

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Category: Congenital Disorders

Introduction: Complete penoscrotal transposition is rare anomaly. Less than 20 cases of extreme complete transposition has been reported in literature. We are presenting a rare case of complete penoscrotal transposition with hypoplastic penis managed by radial artery based single stage forearm free flap phalloplasty. **Case Report:** Ravi kumar 10 yrs old child presented with difficulty in passing urine, incontinence and abnormally placed penis in perineum since birth. On physical examination bladder was distended. There was complete penoscrotal transposition with penis attached to perineum with glans and meatus just above anal verge. There was sub coronal hypospadias with under developed corpora and hypoplastic urethra with severe meatal stenosis. Scrotum was bifid with normally palpable left testis and nonpalpable right testis. Trocar suprapubic cystostomy (SPC) was performed. Karyotyping revealed 46 XY. MRI abdomen revealed right renal crossed fused ectopia with right testicular agenesis. Urinary bladder, prostate and seminal vesicle were normal. Testicular biopsy revealed seminiferous tubules lined by normal spermatogonia. After detailed counselling with parents, decision to correct transposition with radial artery based forearm free flap phalloplasty was done. Total single stage penile reconstruction was done where neo-urethra was anastomosed to normal bulbar urethra. Patient had uneventful recovery and he could void normally. At 3 month PO period he had mild stenosis of anastomotic site and underwent dilation. Now patient is voiding normally. Cosmetically and functionally patient had good result but at adulthood he will require penile implants for sexual activity.

CBVP 09

A new minimally invasive technique of transposing omentum to perineum avoiding transpubic urethroplasty for recto urethral fistula after pelvic fracture urethral injury

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Category: Laparoscopic Urology

Introduction: Rectourethral fistula (RUF) is a morbid complication that can occur post trauma, radical prostatectomy, radiation, or pelvic surgery. Management of these cases is challenging. Use of omentum between rectum and urethra is recommended. We aim to illustrate the feasibility and safety of a new laparoscopic surgical technique for interposition of omentum in patients with complex pelvic fractures urethral injury (PFUI) and (RUF). **Methods:** This is a prospective case series of 3 patients. These patients underwent progressive perineal approach. Simultaneous laparoscopic omental mobilisation was performed. Retroperitoneum was incised by side of bladder. After urethral transection and pubectomy TVT needle was inserted in abdomen below the pubic bone. The tract was dilated. Using right angled clamp, suction or PCNI technique omentum was transposed to perineum. Clinical outcome was considered failure when any postoperative instrumentation was needed/recurrence of RUF. **Results:** Median age 30 years (28-33). They all had an attempt of perineal anastomotic urethroplasty with RUF repair that failed outside our center. 1 patient had a loop colostomy. No intra-operative/post operative complications occurred. Patients were discharged on day 3. Catheter removed after 6 weeks. 3 months follow up shows no fistula recurrence with good urine flow. **Conclusion:** Our new technique of laparoscopic omentoplasty for interposition of omentum in patients with RUF post PFUI is a viable and safe. This allows us to perform a perineal surgery with the benefit of omental interposition using a minimally invasive technique. Further studies with larger number of patients as well as longer follow up would be needed.

CBVP 10

Step by step transvesical bilateral ureteric reimplantation in children: A video atlas

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Category: Paediatric Urology

Objective: Contemporary literature has proven the safety and efficacy of transvesical ureteric reimplantation in children. Most of these series have described the results of unilateral reimplantation. Here in the author describe the technique of transvesical bilateral ureteric reimplantation in step by step manner in children. **Materials and Methods:** A total of 6 patients underwent laparoscopic transvesical bilateral reimplantation by the same surgeon. All the 6 patients had primary VUR. Of these 6 patients, 5 had grade II-III VUR while 1 had grade IV on one side and III on other side. Laparoscopic transvesical bilateral cross-trigonal ureteral reimplantation was performed in all the patients. A pure laparoscopic approach using three 5 mm ports was used. **Results:** The median age was 4.5 years (range 3-8). The median operative time was 150 minutes (range 130-180). There was no conversion or any intraoperative complication reported. Median hospital stay was 6 days (range 5-8). The median follow up is 18 months. On follow up renal dynamic scans normal drainage was reported in all the patients. Reflux resolved in 5 patients. In 1 patient reflux persisted of the same grade i.e. grade IV on one side. This patient had tortuous and dilated ureter (Grade IV) on preoperative voiding cystourethrogram. **Conclusions:** Laparoscopic bilateral transtravesical reimplantation is safe and feasible. Dilated and tortuous ureters (VUR grade IV) are best to be avoided for this technique.

CBVP 11

Robotic nephron sparing surgery in cases of high renal nephrometry scores: Expanding indications for functional preservation

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Category: Uro Oncology

Introduction and Objective: Renal Nephrometry score (RNS) has been used to predict the level of complexity in managing small renal masses SRM's. Based on the RNS, SRM's with high complexity were being managed by either laparoscopic Radical Nephrectomy or Open nephron sparing surgery (NSS). Robotic NSS is now well established modality for SRM's with low and intermediate complexity. However, there is insufficient data regarding outcome of robotic NSS in renal tumors with high RNS ≥ 10 . In this video we present the safety and feasibility of Robotic NSS in tumors with RNS of ≥ 10 . **Methods:** Prospectively maintained data of all robot assisted NSS in last 9 months was reviewed. Seven out of 36 SRM's with RNS of >10 were analyzed. The current video is a compilation of these cases. **Results:** Mean age of the patients was 47.7 years (M:F = 4:3). Five tumors were right sided. Mean diameter of tumors was 6.7 cm (4.9-10.5 cm). Mean operative time was 167.86 minutes (100 to 280 minutes). Mean warm ischemia time was 27.5 minutes (21 to 40 minutes). Mean estimated blood loss was 270 ml (50-700 ml). None of the patients required to be converted to open surgery. The mean length of the hospital stay was 6.1 (3-9) days. **Conclusion** Our data shows that robotic NSS is safe and feasible in patients with high RNS maintaining the trifecta outcomes in NSS and providing the benefits of minimally invasive surgery.

CBVP 12

A novel technique of dynamic lateral suspension of posterior reconstruction suture after vesico-urethral anastomosis during robotic radical prostatectomy-improves early continence

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Introduction: Search for techniques to achieve maximum continence after robotic radical prostatectomy (RRP) is ongoing. We describe a novel technique DLSPRS after vesico-urethral anastomosis during robotic radical prostatectomy in the accompanying video and comparing early continence rates in patients who underwent DLSPRS versus those with only posterior reconstruction group (PRS). **Methods:** Continence rates of 25 consecutive patients who underwent DLSPRS was compared with 25 patients with PRS. In brief technique include posterior rocco repair of sphincter complex. After urethrovesical anastomosis is completed, needles of posterior suture are passed through levator ani muscle and lateral arcuate ligament pulled to elevate the entire sphincter complex. It is presumed that while contracting pelvic floor muscles the entire complex elevates still further helping continence mechanism. Early continence was assessed with self-administrated questionnaires (Expanded Prostate Cancer Index Composite) at 1, 3 and 6 months. **Results:** Patients' characteristics and perioperative outcomes were comparable. In DLSPRS group, the continence rates at 1, 3 and 6 months were 65%, 76% and 88% in PRS group it was 38%, 60% and 69% respectively. DLSPRS group had significantly higher continence at 1 and 3 months with p value of 0.04. There were no complications related to suspension of posterior suture. **Conclusions:** Dynamic lateral suspension of the posterior reconstruction sutures may acts like bladder neck sling. Our very early experience performing this suspension technique at the time of RRP had better early continence recovery. Further prospective non randomized study is underway in our institute to give further insight.

VIJAYAWADA POSTER PRIZE SESSION

VPP 01 – 01

Giant benign adrenal tumors: Not so benign for the surgeon: A series of 4 cases

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Introduction and Objective: Giant adrenal tumors have risk of harboring malignancy thereby require surgical excision. We highlight the challenges faced by operating team during excision of such benign tumors. **Methods:**

Open surgical excision of giant adrenal tumors were done in four patients (two male and two female) with range of 33-56 years. **Results:** Preoperative imaging and hormonal study were done in all but malignancy excluded with certainty in only one case and all were nonfunctional tumor. Maximum diameter of tumors were 30, 25, 21 and 16 cm. Tumor arising from left side (25 cm) was found in one in which en block mobilization of spleen, stomach and pancreas were done to safeguard these structures. The left renal vessels were closely adhered and stretched over the infero-medial aspect of the tumor. They were meticulously dissected and preserved. Due to medial deviation of the aorta, care was taken not to injure the superior mesenteric artery. The tumor was completely excised with preservation of the major vessels and the vital structures. Tumor was encapsulated and histopathology revealed oncocytoma. In the 21 cm tumor on right, multiple rents occurred in inferior vena cava during dissection repaired with prolene. Histopathology revealed schwannoma. It was possible to safeguard kidney, duodenum and inferior vena cava in the 30 cm and 16 cm tumor which came out as adenoma and myelolipoma respectively. All patients are doing well. **Conclusions:** Though benign, size of adrenal tumor does matter to surgeon due to altered anatomy of adjacent vital structures.

VPP 01 – 02

Peyronie's diseases: Criteria for patient selection for tunica lengthening procedure with dermal grafting for good surgical outcome

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Aim: To analyse the favourable criteria in patient selection for successful tunica lengthening with dermal grafting in patients with peyronies disease. **Methods:** 10 patients with stable peyronies disease (>6 months) were analysed between January 2014 and January 2015. All patients were evaluated with detailed history, clinical examination, photographs of erect penis, for degree and direction of curvature and erectile status assessment with intra Cavernosal stimulation doppler ultrasound (ICSDUS). Plaque excision with dermal grafting, for tunical lengthening, was done in all patients. **Results:** Number of patients: 10 Age of patients: 30–45 yrs Etiology Traumatic: 06 Unknown: 04 Plaque size 2–4 cm: 06 >4 cm: 04 Location of plaque Dorsal: 07 Ventral: 03 Degree of curvature 45–60: 08 >60 : 02 Erectile dysfunction Mild (IIEF score 5–7): 04 Moderate (IIEF score 8–16): 02 Severe (IIEF score 17–21): 03 Post operative evaluation at 3 months revealed satisfactory correction of curvature in all patients, Irrespective of plaque size and preoperative degree of curvature. Satisfactory vaginal intromission was seen in all patients post operatively. Erectile dysfunction persisted in 4 out of 5 patients who had moderate to severe erectile dysfunction preoperatively. **Conclusion:** Excision of plaque and dermal grafting in a watertight manner appears to be an effective option in correction of penile curvature in patients of pyeronie's disease, irrespective of plaque size and degree of curvature. However other surgical options must be consider in patients with severe erectile dysfunction.

VPP 01 – 03

Microrna expression profiles in patients with RCC: Preliminary data and the future prospects

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Introduction: MicroRNAs are small noncoding RNA that modulate growth of cells. Their expression profile is different in benign and malignant tissues. The objective of this study was to elucidate the molecular expression of 3 microRNAs in patients with clear cell RCC. **Materials and Methods:** This prospective study included 15 histologically confirmed cases of clear cell RCC. A small piece of tumor and adjacent normal renal tissue was taken for microRNA analysis in RNA Later solution just after specimen removal. Total RNA including microRNA were extracted by Trizol method using column based kit (Qiagen miRNeasy Mini Kit) and then reverse transcribed into cDNA using the reverse transcription kit (Qiagen miScript II RT Kit). The quantitative RT-PCR reaction was performed for relative miRNA expression by using miScript SYBR Green PCR kit (Qiagen, USA). **Results:** Till now 15 patients have been recruited. Mean age of the study population was 58.6 years, 10 were males, and 10 had right sided mass. Mean size of

tumor was 7.9 cm and most common stage was T3A. The relative expression of miRNA 141 was found to be significantly downregulated ($p = 0.002$) and miRNA 34a was found to be significantly upregulated ($p = 0.036$) in tumor tissue compared to adjacent normal tissue. There was no significant alteration in miRNA 200c expression ($p = 0.056$). Diagnostic accuracy of mir 34a was 80% and that of mir 141 was 86.6%. Conclusion: MicroRNA levels are distinctly altered in cancer patients and further study in serum samples is required to assess their clinical utility as biomarkers.

VPP 01 – 04

Radical cystectomy and ileal conduit for bladder cancer: A single centre comparison of laparoscopic and open surgery

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Introduction: Radical cystectomy is the standard treatment of Muscle Invasive Bladder Cancer (MIBC). The advent of minimally invasive surgeries in urology is applicable to cystectomy also. **Objectives:** To evaluate and compare laparoscopic Radical cystectomy and lymphnode dissection (LRC) with the established gold standard Open radical cystectomy with lymphnode dissection (ORC) in the subsets of patients undergoing extracorporeal ileal diversion. **Materials and Methods:** All cases of LRC done from 2010 till date, were analysed retrospectively from a prospectively maintained database and compared with ORC. All patients were treated with cystectomy and a minimum of standard lymphnode dissection. Operative time, estimated blood loss, completeness of resection, post operative pain, analgesia requirement, complications, hospital stay and scar length were analysed. Patients were followed and oncological outcome monitored. **Results:** Patient demography was comparable. Total of 55 ORC with conduits and 35 LRC with conduits were analysed. Median follow up was 33 (3-65) months. Operative time was significantly more with LRC. Average hemoglobin drop, transfusion requirements, analgesic usage, hospital stay and scar length were significantly less with LRC (1.5 gm, 13.1%, 160 mg, 7.2 days, 14 cm vs 3.6 gm, 35.4%, 275 mg, 12.5 days, 35 cm). The average lymphnode yield was more with LRC (37 vs 16). Overall complications were less with LRC (19.6% vs 47%) except 2 (4.4%) open conversions. There was no significant difference in oncological outcome between the two groups. **CONCLUSION:** LRC is safe, feasible, has a lower morbidity and earlier recovery compared to ORC. The average lymphnode yield is more with LRC and oncological efficacy is maintained.

VPP 01 – 05

Prospective randomised study evaluating the effect of intraperitoneal bupivacaine after laparoscopic donor nephrectomy

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Objectives: The objective of this study is to evaluate analgesic effect of intraperitoneal bupivacaine in patients undergoing laparoscopic live donor nephrectomy. **Materials and Methods:** After ethical committee approval and written informed consent, hundred successive patients undergoing laparoscopic live donor nephrectomy were divided randomly into two groups. Group A patients received 20 mL of 0.5% Bupivacaine intraperitoneally while group B patients received 20 mL of 0.9% normal saline intraperitoneally. In both groups, 10 mL was injected into the renal bed, 5 mL onto hepatodiaphragmatic area and 5 mL onto splenodiaphragmatic area under direct vision by the surgeon. Postoperatively patients were assessed based on VAS and requirement of rescue analgesic, hemodynamic parameters and presence of any adverse effects. **Results:** Mean VAS scores were significantly lower in group A at 0 hour, 2 hours, and 4 hour suggesting better control of pain postoperatively in Group A. Mean cumulative requirement of rescue analgesic, pentazocin in first 24 hours postoperatively were significantly lower in group A (33 ± 26 mg) as compared to group B (62 ± 28 mg). Intraperitoneal instillation of bupivacaine led to better control of blood pressure and heart rate in immediate postoperative period and did not increase incidence of adverse effect or hemodynamic complications at a dose used in our study. **Conclusion:** Intraperitoneal bupivacaine instillation is a simple,

safe, inexpensive method for control of postoperative pain in patients undergoing laparoscopic live donor nephrectomy. Use of the correct dose and concentration of the drug is essential for effective pain control.

VPP 01 – 06

Spectrum of IgG4 disease in urology: A case series

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Introduction: Immunoglobulin G4 related disease (IgG4-RD) is an immune mediated systemic disorder, known to involve many organ systems. This is a fibroinflammatory condition characterized by dense lymphoplasmocytic infiltrate, abundant IgG4 rich plasma cells and elevation of serum IgG4 levels. Urologist typically get involved in management of this condition when ureteric obstruction is noted in retroperitoneum. In fact, it is possible that a subset of cases which have traditionally been labelled as idiopathic retroperitoneal fibrosis (IRPF) cases could be classified in the IgG4-RD. We present a series of cases of IgG4 RD in urology. **Materials and Methods:** 5 cases with different spectrum of IgG4-RD in context of urinary system are discussed with their presentation, investigation and management details. **Results:** Mean age was 50.8 years and male to female ratio was 3:2. Three patients presented with varying manifestation of ureteric obstruction like hydronephrosis, renal failure and spontaneous calyceal rupture. One patient had kidney mass with chronic pyelonephritis and another had renal hilar mass. IgG4-RD was confirmed by biopsy and elevated serum IgG4 level. Patient presenting with obstructive uropathy were managed by initial stenting or nephrostomy followed by initiation of immunosuppressives. All patient responded well and are presently on steroid therapy. Hilar mass showed significant reduction in size. One patient underwent nephrectomy. **Conclusions:** High index of suspicion of IgG4-RD by radiologist, immunologist and urologists can avoid unnecessary extirpative surgical intervention. Early diagnosis and appropriate medical management can possibly avoid irreversible fibrosis and loss of organ function.

VPP 01 – 07

Salvage for testicular torsion presenting within 36 hours of torsion

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Objective: Decompression of compartment syndrome is known to salvage tissues in various organ systems. Testes exposed to prolonged ischemia by torsion exhibit compartment syndrome. We demonstrate salvage of testis by tunica albuginea decompression and using tunica vaginalis flap/graft in testes exposed to torsion and presenting within 36 hours. **Patients and Methods:** We report 5 cases (aged 12-20 years; mean 15 years) of torsion testis presenting within 36 hrs. of testicular torsion. Color Doppler shows decreased or absent blood flow. At exploration testes appeared dusky and congested, on manual detorsion the vascularity improved and there was bleeding on incising tunica albuginea. Testicular fasciotomy was performed by making a longitudinal incision in the tunica albuginea. A harvested tunica vaginalis patch was placed and secured in place. **Results:** All the 5 testes were smaller in size than contralateral testis and color doppler showed vascularity in these testes. **Conclusions:** Testicular fasciotomy, combined with a tunica vaginalis patch, relieved testicular compartment syndrome and resulted in testicular salvage in patients presenting within 36 hrs where degree of torsion was less, testis not blue and detorsion improved vascularity.

VPP 01 – 08

Radiographic gapometry score is a simple predictor for anatomical approach in pediatric posterior urethral strictures

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Introduction: Pediatric urethral stricture is a complex entity in itself. It cannot be managed as an adult stricture disease. Further complex are the

repairs of bulbo-prostatic traumatic stricture disease. We aim to validate the Gap/urethral index in pediatric population in order to accurately predict the approach preoperatively. **Materials and Methods:** We analysed our data from 2000-2015 of patients less than 16 yrs who have bulbo-prostatic stricture disease due to traumatic etiology. We reviewed the MCU/RGU and tried to correlate the factors which decide the approach for surgery i.e. perineal or combined abdomino-perineal (A-P) approach. We analysed the Gap/Urethral index by dividing the length of gap by that of bulbar urethra. This is the first study to analyze the role of gapometry to predict the anatomical approach. **Results:** A total of 35 pts underwent repair for B-P urethral stricture disease. 6 underwent Abdomino-perineal (A-P) repair, 8 needed infpubectomy and 11 via perineal approach. Stricture length G/U ratio P value A_P repair 4.5 cm 0.87 0.133 Infpubectomy 3.6 cm 0.71 0.01 P-P repair 2.88 cm 0.64 0.02. **Conclusion:** Most repairs can be performed from perineal approach upto 0.7 G/U index. A G/U ratio above 0.85 is needed for A-P repair to be considered. G/U ratio correlated with success rate of procedure and anatomical feasibility of performing the procedure. This is also due to longer length of bulbar urethra and compliant bony cage of children.

VPP 01 – 09

Augmentation cystoplasty in children: What have we learnt?

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Objective: Aim of the study was to determine the cut-off value of Serum Creatinine for augmentation cystoplasty in pediatric age group. **Methods:** Patient records of all children who underwent augmentation cystoplasty between 2007 and 2014 were reviewed retrospectively. Serum creatinine was assessed at time of surgery, at one year and at last follow-up. ROC curve was plotted. Renal function deterioration was defined as increase in serum creatinine by 25% or more than the base line value at the time of surgery. **Results:** Total 23 patients were included with age between 3 yrs to 16 yrs and mean serum creatinine was 1.4 mg/dl (Range 0.4 mg/dl to 6.4 mg/dl). Out of 23 patients, 11 patients underwent gastrocystoplasty, 10 patients underwent ileocystoplasty and 2 patients underwent ileo-caecal cystoplasty according to patient characteristics. Decline in renal function was observed in 9 (39.13%) patients. Patients having Serum Creatinine \geq 1.6 mg/dl at base line had significantly increased probability of renal function deterioration on follow up ($P = 0.013$, Sensitivity 84.6% and specificity 66.7%). **Conclusion:** Baseline Serum Creatinine \geq 1.6 mg/dl could serve as a predictor of renal function deterioration in augmentation cystoplasty in pediatric patients.

VPP 01 – 10

A retrospective study of complications and their management of children undergoing posterior urethral valve surgery at a tertiary care centre

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Aim: To study the complications of posterior urethral valve surgery and their management at a tertiary care centre in north India. **Materials and Methods:** A retrospective study was conducted on 340 patients. Children between 0-18 years who underwent posterior urethral valve surgery from January 1990 till January 2015 were included. The variables studied were demographic, socioeconomic and clinical data like primary diagnosis, complication, type of surgery performed, immediate and long term postoperative complications and outcome along with management of these complications. **Results:** 309 patients who presented as primary PUV underwent TUVF or some other form of urinary diversion procedure. 31 patient who present as residual valve underwent cystoscopic residual valve fulguration. Common early postoperative complications occurring within first 2 weeks were urinary retention (5.3%), urinary extravasation (1.2%), hematuria (1.8%), anuria (2%), vesicostomy prolapse (8.6%), vesicostomy stenosis (5.7%) and peri-stomal skin excoriation (17.1%). Common late complications (occurring >2-4 weeks after surgical

procedure) were urethral stricture (1.7%), stress urinary incontinence (0.58%), periurethral abscess (0.29%), urethro-cutaneous fistula (1.17%). Most of the complications were managed conservatively. Urinary diversion was needed in 7 out of 309 patients who underwent TUVF in the form of vesicostomy or bilateral percutaneous nephrostomy placement for anuria. Urethral stricture occurred in 1.7% of the patients and these patients were managed cystoscopically. **Conclusion:** Transurethral valve fulguration is an effective treatment for PUV with low complication rates. Few patients will require urinary diversion in the form of cutaneous diversion or ureterostomy as an initial treatment option. In most of the cases complications associated with these procedures could be managed conservatively with few patients requiring surgical intervention.

VPP 01 – 11

Double transection with injury at membrano-bulbar and prostate-bladder neck after pelvic fracture urethral injury

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Introduction: Pelvic fracture urethral injury (PFUI) is usually associated with a single transection at membranobulbar junction. Rarely, pelvic fracture can cause simultaneous double transection at the bladder neck and the membranobulbar junction. The result is a double block. The prostatic urethra is completely sequestered. **Aims and Objectives:** Our objective is to describe this entity and outline our experience **Methods:** Retrospective review of 7 patients and their postoperative progress. Proper preoperative evaluation requires Micturition Urethrogram (MCU) and Retrograde Urethrogram (RGU) Pelvic MRI is then obtained. First technique The bulbar urethra is mobilized perineally The posterior urethra is then opened over the needle per rectally and the bulbomembranous anastomosis (BMA) is completed. Next, an infraumbilical incision is made and the bladder neck is opened The bladder neck-proximal prostatic anastomosis is then performed suprapubically. Second technique Bulbar urethra is mobilized perineally and bladder neck is opened in the retropubic space. The prostatic urethra is opened proximally and a 6 Fr endoscope is passed distally to visualize the membranous urethra. The membranous urethra is opened as distally as possible. A BMA is then performed via the perineum. **Results:** We have treated 7 patients with double transection. 5 children and 2 adults were followed for a mean 2.5 years. 2 (40%) children required redo surgery. All (100%) of the children are continent and have good flow, but 2 have nocturnal dribbling. **Conclusion:** Double transection with injury at membranobulbar and prostate bladder neck region requires two separate anastomosis to be performed. Postoperative continence is possible

VPP 01 – 12

Renovascular injuries during laparoscopic donor nephrectomy: Optimizing intraoperative decision making

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Introduction: Laparoscopic donor nephrectomy (LDN) has obvious patient benefits. However, serious vascular complications exist which can be catastrophic in an otherwise healthy individual. Management of intraoperative renovascular complications during LDN can present serious challenge. **Materials and Methods:** During a 14 year period, from 2000-2014, 1475 patients underwent laparoscopic donor nephrectomy by our single team. A retrospective analysis of video recordings was performed to identify and evaluate the renovascular complications associated with the procedure. The objective of our study was to review and standardize the intraoperative response to renovascular injuries during laparoscopic donor nephrectomy. **Results:** Intraoperative events occurred in 5.4% and has remained same over the years. Open conversions were required in 1.5% with less than 0.3% emergency conversions for vascular injuries. Twenty four cases of renovascular complications were identified involving twenty venous and four arterial injuries. 75% (18/24) vascular injuries were dissection injuries where as 25% (6/24) were instrument related. Responses to vascular injuries have evolved with experience from haphazard reactions

to logical approach based on type of injury and calibre of vessel involved. Open conversions were mainly required for arterial or inferior vena caval injuries. Conclusions: Laparoscopic donor nephrectomy is associated with low incidence of renovascular injuries. Laparoscopic or open surgical management may be required when problems arise to optimize donor safety and allograft survival. A standardised approach to renovascular injuries promotes logical challenge to such challenges.

VPP 01 – 13

CT renal volumetry in voluntary kidney donors: Can it predict post surgery renal function in donors

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Introduction and Objective: Renal transplantation is the best method of renal replacement in end stage renal disease (ESRD) patients. However the ever-growing need for grafts has pushed lower cut-off limits of renal function in living donor. There is need to determine valid predictors of post donation renal function in voluntary kidney donors (VKD). The present study was designed to study if CT volumetry can predict the GFR, post VKD surgery. **Methods:** 64 VKD were evaluated with preoperative CT angiography and split GFR estimation with Tc-99m DTPA. Enhancing renal parenchymal volume was estimated using software in Phillips Brilliance CT machine. All patients underwent GFR estimation at 3 months and 1 year following surgery. Pre-operative parameters like split GFR, longitudinal length and CT volume were studied for effect on GFR at 3 months and 1 year with logistic regression analysis using SPSS 21. **Results:** 64 patients were included with mean age of 45, with female donors forming the majority (n = 54, 85%). Logistic regression analysis revealed that CT derived preoperative volume of the remaining kidney was a significant factor in determining post surgery GFR at 3 months and also percent increase in baseline GFR of remaining kidney (p < 0.001, p = 0.044 respectively). Preoperative GFR of remaining kidney was a factor that determined post surgery GFR at 3 months but not percent increase in baseline GFR. **Conclusion:** CT volumetry of remaining kidney can predict increase in GFR at 3 months following VKD surgery and can help in selection of donors with low borderline GFR.

VPP 01 – 14

In-situ anastomosis of multiple graft arteries to the branches of internal iliac artery: An "underutilized" technique to address multiple renal arteries in live donor kidney transplantation

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Introduction: Renal allografts with multiple arteries pose a real challenge particularly in living donations. A number of reconstruction techniques have been described to address this issue. We present a technique of "in-situ" anastomosis of two or three graft arteries to the different branches of internal iliac artery (IIA), with successful outcome. **Materials and Methods:** Recipients' beds are prepared in standard manner. All the suitable branches of IIA are dissected free after clamping the main trunk. The individual graft arteries are anastomosed end-to-end in turn to these branches. We compared their outcomes with the published cohort of patients where "explanted" and not "in-situ" reconstruction with the branches of IIA was used. We also compared this technique with our series of patients in whom other methods of reconstruction of multiple graft arteries were used. **Results:** Five grafts had dual arteries and two had three. There were no immediate vascular issues. Primary graft function was established in all the patients. On follow-up Doppler studies, good perfusion throughout the transplanted kidney was documented. Cold ischemia time in this technique was comparable to other types of reconstruction in our own series, however it was statistically higher in published series of "explanted" IIA graft technique. There was no difference in outcome though. **Conclusions:** In-situ anastomosis of multiple graft arteries to the branches of IIA is a good option of vascular reconstruction with comparable graft function to other techniques. Contrary to popular belief, cold ischemia time is not significantly higher than in the sequential anastomosis technique.

VPP 01 – 15

A comparative study between intracorporeal spongiosum block versus intraurethral lignocaine in optical internal urethrotomy for short segment anterior urethral strictures

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Introduction: Optical internal urethrotomy (OIU) is most commonly performed procedure for short segment anterior urethral strictures. The study compared difference in pain control and results of OIU by intracorporeal spongiosum block over topical anesthesia in short segment anterior urethral strictures. **Methods:** Forty patients with single, short segment anterior urethral stricture were prospectively randomized into two groups. Group 1 patients received 1% lignocaine intracorporeal spongiosum block and group 2 patients received topical 2% lignocaine jelly intraurethral during OIU. Pain perception during and after the procedure were assessed using visual analog scale (VAS). The changes in heart rate, blood pressure during the procedure and procedure-related complications were recorded. Follow up was done with uroflowmetry and urethral calibration with 18 Fr Foley's catheter. Retrograde urethrography, micturating cystourethrography and cystourethroscopy were performed as needed. Statistical analysis was done using the Mann-Whitney test or t-test (SPSS v20.0). **Results:** There was significantly lower mean intraoperative VAS score in group 1 (3.1) than group 2 (5.7) (P < 0.05). The intraoperative rise in pulse rate and in blood pressure were significantly greater in group 2 patients than in group 1 (P < 0.05). At 6 months follow-up, 5 patients in group 1 and 4 patients in group 2 developed recurrent strictures. **Conclusion:** Intracorporeal spongiosum block has better pain control than intraurethral lignocaine jelly alone. It can be a useful and feasible anaesthesia technique for OIU in high risk patients for general/regional anesthesia.

VPP 01 – 16

Could MRI replace bone scanning in newly diagnosed prostate cancer patients with suspected metastases?

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Introduction: Technetium Bone Scan (BS) is the investigation of choice to identify bony metastasis in patients with prostate cancer. However, MRI is increasingly being used as an alternative to bone scanning to diagnose bony metastases. **Aim:** To identify the pattern of bony metastases in newly diagnosed prostate cancer patients and to determine the extent of imaging required. **Materials and Methods:** 2234 newly diagnosed prostate cancer patients diagnosed between 2002 to 2014. were stratified into risk groups, of whom 702 were considered high risk of bony disease. For the purpose of this study the bony skeleton is divided into groups: Group 1: spinal column, pelvis including femoral head and neck; Group 2: ribs with sternum, clavicle and scapula and; Group 3: skull, upper and lower limb bones. **Results:** Of the 702 patients, 87 patients had a positive bone scan. Metastases in group 1 bones, +/- involvement of group 2 or 3, were seen in 82 patients, in group 2 alone in 4 patients, and in group 3 alone in 1. Replacing bone scan by MRI of the spine/pelvis would have missed 5.7% of those patients with metastases but only 0.7% of the group at risk. **Conclusion:** MRI spine/pelvis can safely replace bone scan in the staging of newly diagnosed prostate cancer patients. It is likely that the small number of patients with extra spinal/pelvic disease that may be missed by MRI spine/pelvis alone will be outweighed by the greater sensitivity of MRI over bone scan in detecting small volume bony disease.

VPP 01 – 17

Increasing the number and pattern of cores in standard TRUS biopsy yields comparable results as compared to MRI-TRUS fusion biopsy

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Aim: To compare the detection rate of prostate cancer between a modified (trans-rectal ultrasound) TRUS guided biopsy practice and MRI-TRUS fusion biopsy. **Methods:** It is a standard practice for the author to biopsy the apex and anterior gland either as a single core or two separate cores on top of standard 12-core biopsy unless one of the 12-core biopsy could cover these parts of the prostate. Patients who had MRI first had targeted biopsy of lesions and a standard biopsy. A prospective database was maintained for all patients who had prostate biopsy by the author. This is a contemporary comparison between the series of patients who had conventional TRUS biopsy and the initial MRI-TRUS fusion biopsy patients during the same period by the author. **Results:** Over the ten-month study period, 41/77 (53%) patients who had TRUS biopsy and 20/31 (64.5%) patients who had MRI-TRUS fusion biopsy were found to have prostate cancer. Average number of cores was 13.5 in TRUS arm and 18.9 in MRI-TRUS arm ($p = 0.00$). No statistically significant difference was found between the two arms in terms of age, PSA, prostate volume, PSA density, cancer detection rate, whether or not abnormality is noted in TRUS scan, Gleason score when cancer detected and the risk group the patients belong. On multiple logistic regression, increasing age is the only significant factor in cancer detection in both arms. **Conclusion:** A modified TRUS biopsy protocol yields comparable cancer detection rates to MRI-TRUS fusion biopsy. A multicenter randomized study will help in confirming these findings.

VPP 01 – 18

Evaluation of outcomes of salvage robotic prostatectomy: Single institution experience

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Introduction: PSA screening scenario is improving in India. Similarly more men getting treated for prostate cancer by non surgical methods. There is a significant number of patients who experience recurrent prostate cancer after non-surgical primary therapy. Salvage robot assisted radical prostatectomy (sRARP) represents a feasible treatment option in these cases. **Methods:** We retrospectively reviewed our database of more than 8,500 patients who have undergone robot assisted radical prostatectomy. Over a period of 8 years (2008-2015) we identified 65 patients who have had sRARP performed after a failure of primary ablative treatment. **Results:** The median interval from primary therapy to sRARP was 48 (range 26-85) months. The median age of patients undergoing sRARP was 69 (65-73) years. 17 (26.2%) patients had seminal vesicle invasion. Positive surgical margins were found in 11 (16.7%) patients. There were no cases of rectal injury or any intraoperative complications. Anastomotic leaks were found in 18 (27.7%) cases at 10-postoperative day. 16 (24.6%) patients had a biochemical failure after a median follow up of 14.5 (8-21) months. All 65 patients were continent prior to salvage RARP and 53.8% reported continence after surgery. 19 patients were considered potent before going through salvage RARP. 7 of these patients (36.8%) retained potency after the salvage procedure with nerve sparing technique done bilaterally in absolute majority of cases. Seminal vesicle invasion, pre-op Gleason >7 , and positive surgical margins were predictive of biochemical recurrence. **Conclusion:** This large case series further validates sRARP as a suitable treatment option for patients who have experienced localized recurrence of prostate cancer.

VPP 01 – 19

Vascular endothelial growth factor as a tumor marker for urinary bladder carcinoma

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Introduction: VEGF plays definite role in pathogenesis of cancer by causing angiogenesis. We conduct a study to understand and establish the diagnostic and prognostic use of VEGF and micro vessel density (MVD) in cases of bladder cancer. **Materials and Methods:** The study was conducted in our department of urology between January 2011 and

December 2013. 102 patients underwent screening, of which 35 patients were enrolled. Patients were diagnosed by history, clinical examination, radiological investigation (ultrasound KUB, CT-scan), urine cytology and histopathology. Thirty five normal individuals were also enrolled as controls. Lowry method was used for VEGF level measurement. **Results:** We found significant statistical difference between urine and tissue VEGF level in cases and control group. We also found a direct correlation between VEGF level and tumor stage. MVD was also found to increase with tumor stage. **Conclusion:** VEGF can serve as markers for therapeutic guidance.

VPP 01 – 20

Functional, oncological and perioperative outcomes following neoadjuvant chemotherapy in patients undergoing radical cystectomy and urinary diversion: A retrospective analysis

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Introduction: Although therapeutic guidelines recommend the use of neoadjuvant chemotherapy before radical cystectomy (RC) in patients who have muscle-invasive bladder cancer (MIBC), this approach remains largely underused because of concerns regarding morbidity. Our study aims to assess the implications of neoadjuvant chemotherapy on the functional, oncological & perioperative outcomes in patients undergoing radical cystectomy and urinary diversion. **Materials and Methods:** All patients who underwent radical cystectomy with urinary diversion for histologically proven MIBC between May 2009 and August 2015 were analysed retrospectively. Those patients who did not receive neoadjuvant chemotherapy were excluded from the study. The clinical course, pathological characteristics, and clinical outcomes (both oncological and functional) were evaluated. **Results:** A total of 50 patients underwent RC of which 30 patients received neoadjuvant chemotherapy. Conduit, neobladder and ileal T pouch were performed in 14, 14 & 2 patients respectively. Median age of patients was 60.5 years and median follow-up duration 3.2 years. All patients required blood transfusion in the immediate postoperative period. Wound infection and dehiscence noted in 4 & 3 patients respectively. Mean hospital stay was about 26 days with low readmission rates. Urinary retention was found in 1 patient and incontinence in 2 patients. Recurrence occurred in two patients with 1 death following recurrence. **Conclusion:** In patients who have MIBC treated with RC, the exposure to neoadjuvant chemotherapy is neither associated with increased risk of perioperative morbidity nor has any impact on functional and oncological outcomes. Substantial efforts should be made to improve guideline adherence to the use of neoadjuvant chemotherapy when clinically indicated.

VPP 01 – 21

Robot assisted nephron sparing surgery: Initial experience with the DA Vinci SI

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Introduction: Robot assisted nephron sparing surgery (NSS) has become a safe and feasible procedure for small renal masses (SRM). It is emerging as a viable option for highly complex tumors which were being managed either by laparoscopic radical nephrectomy or open NSS. We report our experience of first 25 cases. **Methods:** Prospectively maintained data of all robot assisted NSS was reviewed and data of twenty five patients was analyzed using descriptive analysis. **Results:** Mean age was 53.75 years (M: F = 3: 2). There were 12 left and 13 right sided tumors. Mean diameter of tumors was 4.83 cm (2.1–10.6 cm). Renal nephrometry score ranged from 4 to 11. Seven patients had RNS ≥ 10 . Mean operative time was 181.38 minutes (80 to 420 minutes). Mean warm ischemia time was 26.3 minutes (15 to 44 minutes). Mean estimated blood loss was 310.4 ml (100–700 ml). Pelvic/lyceal system was entered in thirteen cases. Complications were of Clavien Dindo grade I and II. There was no conversion to open. Mean hospital stay was 6.5 days (3–12 days). Mean preoperative and postoperative

creatinine levels were 0.83 mg/dl (0.5 to 1.65 mg/dl) and 0.96 mg/dl (0.6 to 1.8 mg/dl) respectively. Histopathology revealed clear cell carcinoma in 19 patients. Conclusion: Our data shows feasibility and safety of robot assisted NSS in achieving reasonable trifecta outcomes in renal tumors. Robotic assistance has currently expanded the indications of NSS to larger and complex tumors due to its obvious advantages.

VPP 01 – 22

To study usefulness of renal resistive index in acute renal colic

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Introduction: Intrarenal Doppler ultrasonography (DU) can be used to distinguish obstructive from non-obstructive chronically dilated collecting systems, with the resistive index (RI) being most widely measured. When the collecting system is acutely obstructed, the pressure of renal calyces increases with changes in renal blood flow resulting in increased RI. **Aim:** To determine the sensitivity of renal doppler (RI) in differentiating obstructive and non-obstructive renal calculi in renal colic. To find its correlation with unenhanced CT-KUB. **Materials and Methods:** 78 patients of renal colic presenting at Goa Medical College over 6 months were studied. Renal DU with measurement of mean RI and the difference between the mean RI (Δ RI) was calculated in both obstructive and normal kidney. Unenhanced CT-KUB was done for evaluation of renal/ureteric calculi in all patients. **Results:** The mean RI of obstructive kidney secondary to calculi was 0.732 compared to mean RI of contralateral normal kidney i.e. 0.687. Mean Δ RI was 0.05 and 0.01 in obstructive and non obstructive group. 13 patients had increased renal RI without hydronephrosis but showed obstructive calculi on unenhanced CT-KUB. Increased mean resistive index is highly significant for determination of obstruction. Sensitivity of RI in determination of obstruction is 85.48% with specificity of 81.25%. **Conclusion:** Renal DU with measurement of RI is simple, non-invasive and highly sensitive method that gives precise information about obstructive urinary calculi in patients with renal colic. In patients of colic with increase in RI without hydronephrosis on USG, high index of suspicion of obstructive calculi should be kept.

VPP 01 – 23

High energy holmium laser combined with suction for large renal stone lithotripsy

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Introduction and Objectives: The most common method for treatment of large burden kidney stones utilizes a direct approach to the kidney by percutaneous nephrolithotomy (PCNL). In order to achieve stone clearance remaining fragments need to be collected and removed. When treating large stone burdens, this can be a tedious and time consuming. The objective of this study was to demonstrate the use of high power holmium laser lithotripsy with simultaneous aspiration for the removal of large kidney stones. **Materials and Methods:** Prospective, open, single center study including twenty patients presenting with large burden kidney stone of at least 2 cm on a single diameter, requiring a PCNL procedure. A single procedure incorporating high powered holmium laser combined with suction and laser suction probe was performed. Stone clearance was demonstrated at the 1 month follow-up visit. **Results:** PCNL was performed in 19 patients aged 52.52 ± 23.5 years. There were 17 male patients and 2 female patients. The mean stone size and stone volume was 35.67 ± 23.74 mm and 10450 cm³ respectively. The mean operative time was 57.5 ± 27.9 minutes. The mean Lithotripsy time was 24.15 ± 19.25 minutes with Hb drop of 1.24 gms%. Four patients had postoperative fever and 2 patients had hematuria out of which 1 required angioembolisation. Complete stone clearance was achieved in 15 patients at 1 month. **Conclusions:** Removal of large burden kidney stone with high power holmium laser and simultaneous aspiration is efficient and safe. Calculi could be broken into fine dust reducing the need for fragment collection and resulted in shorter procedure time.

VPP 01 – 24

Initial experience with tubeless ambulatory day care PCNL using "Santosh – Post Graduate Institute" hemostatic seal

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Introduction: Nephrolithiasis is a common problem in India with PCNL being one of the commonly performed procedures. However, one of the limitations compared to procedures like ESWL and URS has been the need to hospitalize for risk of bleeding, sepsis and nephrostomy tube management. This prospective study was performed to assess the feasibility of ambulatory day care tubeless PCNL in a group of selected patients. **Materials and Methods:** It was a prospective case series from September, 2014 to June, 2015. 78 cases were included based on the inclusion criteria. Patients underwent standard PCNL under general anesthesia. PCNL tract was occluded with composite seal (oxidized regenerated cellulose strip wrapped over gelatin-sponge soaked in 250 mg tranexamic acid with 5 ml of 1:1000 nor-adrenaline and 76% urografin). Patients were discharged the same evening or next morning based on discharge criteria. **Results:** Of the total cases screened, 65% (78 cases) met the inclusion criteria and underwent day care PCNL. 8 were further excluded based on intra and post-operative exclusion criteria. 53 cases (76%) could be discharged the same evening while 17 cases (24%) left the hospital next morning. Mean hemoglobin drop was 0.6 ± 0.4 gm/dl. Six of the 70 cases (8.6%) had follow up emergency visits. No mortality was reported. Overall, 90% of the pre-operatively selected cases could complete the day care protocol and 91% of them had uneventful follow up. **Conclusion:** Tubeless day-care PCNL with tract seal appears a feasible approach. However, further RCTs are needed for its head-to-head comparison with standard PCNL and ESWL.

Podium Session 1: PEDIATRICS AND CONGENITAL DISORDERS – 1

POD 01 – 01

Zinner syndrome: A rare condition presenting as voiding symptoms and infertility in adolescents and young adults: A case series

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Introduction: Zinner syndrome is a rare congenital abnormality of the mesonephric duct (Wolffian) consisting of unilateral renal agenesis, seminal vesicle cyst and ipsilateral ejaculatory duct obstruction. Abnormalities involving the contralateral seminal vesicle or ejaculatory duct are extremely rare. We present the therapeutic approach in a patient with renal agenesis and large contralateral seminal vesicle cyst. **Materials and Methods:** Four cases presented with Voiding LUTS (weak stream and hesitancy) RT Renal Agenesis RT seminal Vesicle large Cyst RT Dilated Ejaculatory Duct/Seminal Vesical Cyst Laparoscopic Excision of seminal vesical cyst done under GA. **Results:** Operative time 70-120 mins Discharged Postop day 2 Voiding trial after 2 weeks-successful Pathology-Benign Seminal Vesical Cyst and Mesonephric Duct 5 weeks follow Symptoms improved Voiding improved PVR 15 cc-27 cc. **Conclusion:** Zinner syndrome is a rare urological condition that must be suspected in the young adult with recurrent irritative-obstructive lower urinary tract symptoms associated with pelvic pain syndrome, pelvic cystic mass, unilateral renal agenesis and significant alteration in sperm parameters. **Suitable Treatment Options:** Medical and Surgical Antibiotics and Transurethral drainage Transurethral incision of ejaculatory duct Open/Lap/Robotic Excision

POD 01 – 02

Bilateral single system ectopic ureters

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Bilateral single system ectopic ureter is a rare congenital Anomaly. Incontinence resulting from the anomaly is devastating to the child. The

objective of management in these cases is to obtain long dry intervals, which is seldom obtainable because of poorly developed trigone and bladder neck region. During the period August 2010 to May 2015, we have come across 6 cases of BSSEU at our centre, each case managed on an individual basis achieving satisfactory results with regards to incontinence.

POD 01 – 03

Double breasting spongioplasty in TIPU: A new technique Bhat AL

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Introduction: Main disadvantage of conventional spongioplasty is superimposition of suture lines of the neourethra, spongioplasty and skin closure, which is likely to increase the chances of fistula. So objective of the study was to modify the technique of spongioplasty to avoid the overlapping of suture lines by double breasting of spongiosal pillars. **Materials and Methods:** A prospective study of 60 primary hypospadias was undertaken from August 2012 and March 2014. **Technique:** Mobilization of the urethral plate and the spongiosum is done by creating a plane just proximal to the meatus. First layer of spongiosum is sutured towards lateral side of the neo-urethra covering the suture line. A second double breasting layer is sutured over the first layer with its suture line towards the opposite side covering the suture line of the first layer; thus avoiding overlapping of suture lines of all the three layers. **Results:** Age of the patients was from 10 months to 16 years with a mean & median of 3.73 and 3.50 years respectively. Hypospadias was distal, mid and proximal in 38, 10 and 12 cases respectively. Three patients had developed complications (seroma, fistula and meatal stenosis 1 each) and overall complication rate was 5% and fistula rate was 1.66%. **Conclusion:** Double breasting spongioplasty avoids superimposition of suture line and adds two layers of spongiosum over neourethra, thus decreases the chances of urethral fistula and gives cylindrical shape to neourethra. The technique is simple, easy to understand, can be done even by the beginner and reproducible.

POD 01 – 04

Efficacy and safety of percutaneous nephrolithotomy in children: 10 year experience in a single center

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Objectives: To analyze our 10 year data on pediatric PCNL. **Methods:** We retrospectively reviewed the files of 84 children below the age of 15 years with 96 renal units (mean age 10.48 years; range 6 months-15 years) who underwent PCNL between May 2006 and April 2015. The demographic characteristics, mean operative time, mean hemoglobin changes, number of percutaneous accesses, method of drainage used, analgesic requirement, mean hospitalization time, stone-free rate, and complications were collected. In infants we used a novel technique of tract dilatation by means of ureteroscopic balloon catheter. **Results:** Stone bulk ranged from 250 to 1220 mm² (mean 560.08 mm²). 22 patients had staghorn stones. 23 patients had primary superior calyx access with 13 of these being supracostal (above the 12th rib). Tubeless PCNL had been performed for 31 patients. 1 patient developed Hydrothorax with supracostal puncture. 1 patient had persistent PCN site leak. **Conclusions:** PCNL is an effective and safe form of therapy in pediatric stone disease including staghorn calculi. The superior calyx puncture is safe and effective in the pediatric population. Tubeless PCNL in children has the advantages of being less painful, less troublesome and shortening the hospital stay in optimally selected patients. Use of ureteroscopy balloon catheter for tract dilatation is a novel technique in infants.

POD 01 – 05

Anogenital distance in newborns

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Introduction: Anogenital distance (AGD) is the distance between the anus and the genitalia and is a sexually dimorphic index that, on average is twice as great in males as in females, and serves as a marker of proper male

development. The aim of this study was to determine the normal values for anogenital distance in South Indian newborns of both genders. **Materials and Methods:** All newborns in our hospital were included in the study. A well trained investigator measured the Anogenital distance using a sliding digital vernier calipers graduated in millimeters. Anogenital distance was measured from the center of the anus to the posterior convergence of the fourchette in females and from the center of the anus to the junction of the smooth perineal skin with the base of scrotum in males. **Results:** The mean AGD in male newborns was 21.06 ± 5.57 (12.11 to 33.14) mm and 12.02 ± 2.81 (6.9 to 11.6) mm in female newborns. The three newborns with penile hypospadias had a mean AGD of 9.2 mm. **Conclusions:** The findings of this study provide data that can be used as reference standards with regard to Anogenital measurements of the posterior genital structures in South Indian male and female newborns (p < 0.05).

POD 01 – 06

Early pyeloplasty in children with antenatally diagnosed pelviureteric junction obstruction

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Introduction: A common cause of neonatal hydronephrosis is ureteropelvic junction obstruction (UPJO) accounting for approximately 10% of prenatal hydronephrosis. The goal of postnatal management is preventing renal damage, not at the expense of performing unnecessary surgery. Therefore, aggressive observation is recommended in these children with antenatally diagnosed hydronephrosis. **Materials and Methods:** We retrospectively reviewed records of children with antenatally diagnosed hydronephrosis secondary to UPJO who underwent surgical repair within 12 weeks of birth at our hospital. The data was analysed and statistical inferences drawn. **Results:** Fifty-eight children (41 males and 17 females) with antenatally diagnosed hydronephrosis secondary to UPJO, underwent pyeloplasty within 12 weeks of birth. Poorly functioning kidney (split renal function <35%) was commonest indication for surgery. Other indications included huge hydronephrosis, UPJ obstruction in solitary kidney, increasing hydronephrosis on Post-natal ultrasonography & raised renal parameters. 27 children had poorly functioning kidneys on DTPA scans. Four of these had bilateral dilated pelvicalyceal system, however opposite kidneys showed better function with Glomerular filtration rate being more than 50 ml/min. Post-operative DTPA's, 3 months following surgery revealed improvement of split renal function in 47 (81%) children & improved drainage in 56 (96%). Repeat DTPA's done after 12 months revealed improved function in 55 (94.8%) and good drainage in 56 (96%). Three children had stable function. None of the kidneys showed deteriorated renal function. **Conclusions:** Early (within 12 weeks) postnatal intervention is needed in 12% of children with antenatally diagnosed hydronephrosis secondary to UPJ obstruction. Post surgical outcome is associated with improved renal function in 94.8% of the children.

Podium Session 2: ENDOUROLOGY AND LAPAROSCOPY – 1

POD 02 – 01

Use of a thermoexpandable metal alloy stant (Memokath): Our initial experience

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Introduction: To analyze our initial experience with memokath as a minimally invasive management option in obstructive uropathy. **Methods:** We retrospectively reviewed the records of patients treated with memokath for various indications between July 2012 and May 2015. **Results:** A total of 56 patients were identified. The study included 16 urethral stricture cases (14 bulbar and 2 posterior urethra) and one bladder neck contracture patient. A total of 11 renal units were stented. In upper tract obstructions, one was a post renal transplant with ureteric stricture, one previously failed pyeloplasty, 7 benign ureteric

strictures, and two malignant strictures. Patients with stricture disease tolerated the stents well with minimal discomfort. Ureteral obstruction was managed successfully in 90.9% of patients. One patient required temporary D-J stenting due to memokath migration. One patient with urethral memokath required its removal due to recurrent hematuria. Most common complications encountered were transient urinary tract infections seen in three patients and hematuria in two patients. Results: As a minimally invasive treatment modality in obstructive uropathy, memokath, has a realistic potential particularly in re-do cases and anaesthetically poor candidates giving fairly good outcomes.

POD 02 – 02

Stone distribution and site of puncture as predictors of PCNL outcome in patients with complex multiple renal calculus

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Introduction: Patients with complex multiple renal calculus (calculus in different parts of pelvicalyceal system) poses many difficulties during PCNL like higher incidence of residual calculus and multiple tracts requirement. We evaluated impact of stone distribution and site of puncture on PCNL outcome in these patients. **Materials and Methods:** 50 patients with complex multiple renal calculus undergoing PCNL during January 2015 to July 2015 were enrolled in our study. Stone distribution was determined on basis of IVP. PCNL outcome was determined in terms of number of tracts, residual stone, operative time, hemoglobin fall, creatinine rise, analgesic required, hospital stay. **Results:** Patients with stone distribution involving two or more calyces had higher incidence of multiple tracts and residual stone. Amongst these, multiple tracts requirement was more in those with all 3 calyces involved; and upper & middle calyces involved (45% and 33% respectively); residual stone was more in those with all 3 calyces involved; and upper & middle calyces involved (40% and 30% respectively). Superior posterior puncture achieved maximum stone clearance. Patients requiring multiple punctures had significantly longer operative time (50.92 min vs 69.63 min, P value < 0.01) and analgesics dose requirement (3.23 vs 5.28, P value < 0.01) while there was no significant difference in hemoglobin fall, creatinine rise and hospital stay. **Conclusion:** Stone distribution and site of puncture impacts the number of punctures required and stone clearance achieved. With timely multiple punctures done, there is no significant hemoglobin fall or creatinine rise though there is longer operative time and analgesic requirement.

POD 02 – 03

Holmium laser transurethral resection of bladder tumor: Our experience

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Purpose: To compare the safety and efficiency of conventional monopolar and holmium laser transurethral resection of bladder tumor (CM-TURBT and HoL-TURBT) while managing primary non-muscle invasive bladder cancer. **Patients and Methods:** From 2012 to 2014, 50 patients with primary non-muscle invasive bladder cancer underwent endoscopic surgery. Among them, 27 patients underwent CM-TURBT and 23 patients underwent HoL-TURBT. All patients were divided into three risk groups (low, intermediate, and high) based on the European Association of Urology guidelines and prognostic factors of recurrence. Clinical data, included preoperative, operative, and postoperative management and follow-up, were recorded. **Results:** Patient demographics and tumor characteristics in all three groups were compared before surgery. There was no significant difference in operative duration among the three groups. Compared with the CM-TURBT group, HoL-TURBT group had less intraoperative and postoperative complications, including obturator nerve reflex, bladder perforation, as well as bleeding and postoperative bladder irritation. There were no significant differences among the two groups in the transfusion rate and occurrence of urethral strictures. Patients in the HoL-TURBT group had less catheterization and hospitalization time than those in the CM-TURBT group, and there were no significant differences in each risk

subgroup as well as the overall recurrence rate among the CM-TURBT and HoL-TURBT groups. **Conclusions:** HoL-TURBT might prove to be preferable alternatives to CM-TURBT management of non-muscle invasive bladder cancer. HoL-TURBT, however, did not demonstrate an obvious advantage over CM-TURBT in tumor recurrence rate.

POD 02 – 04

Outcomes of retrograde intrarenal surgery for renal stones and predictive factors of stone-free rate

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Aim: The aim of this study was to evaluate the efficacy and safety of retrograde intrarenal surgery (RIRS) for the treatment of renal stones and to analyze the predictive factors for stone-free. **Materials and Methods:** Between September 2014 to June 2015, 66 renal units (60 unilateral & 3 Bilateral) were treated with RIRS at our department. Stone-free and success were respectively defined as no visible stones and clinically insignificant residual stones less than 3 mm on postoperative imaging; predictive factors for stone-free were evaluated. **Results:** Of the 66 renal stones, 18 stones (27.3%) were located in the upper pole or midpole renal pelvis and 48 (72.7%) in the lower pole with or without others, respectively. The mean cumulative stone burden was 168.9 ± 392.5 mm². The immediate postoperative stone-free rate was 69.7%, and it increased to 72.7% at 1 month after surgery. The success rate was 80.3% both immediately after the operation and 1 month later. In the multivariate analysis, stone location except at the lower pole ($p = 0.049$) and small cumulative stone burden ($p = 0.002$) were significantly favorable predictive factors for the immediate postoperative stone-free rate. The overall complication rate was 6%. **Conclusions:** RIRS is a safe and effective treatment for renal stones. The stone-free rate of RIRS was particularly high for renal stones with a small burden, except for those located in the lower pole. RIRS could be considered in selective patients with renal stones.

POD 02 – 05

Percutaneous nephrolithotomy in autosomal dominant polycystic kidney disease : Our experience

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Introduction: ADPKD generally presents in adulthood with hypertension and worsening renal function. The incidence of nephrolithiasis in ADPKD has been found to be the same as in the general population. The distorted Pelvicayceal System (PCS) anatomy is expected to present unique problems during PCNL in ADPKD. We present here our experience in doing PCNL for ADPKD. **Materials and Methods:** We present here our experience with PCNL in seventeen renal units in thirteen patients of ADPKD over the last five years. All of them underwent standard PCNL with 24 or 26 Fr access sheath into the PCS. **Results:** Of the thirteen, ten were male and three females. Two male patients had bilateral calculi requiring bilateral PCNL, done sequentially with a gap of 2 weeks between the procedures. Nine patients had Chronic kidney disease (CKD). The average stone burden was 2.1 cms (1.6 cms to 3.5 cms). The overall success rate was 94% (16 out of 17 renal units achieved a complete stone clearance or residual fragments less than 4 mm). One patient required a blood transfusion. 1 patient needed a re-PCNL and 2 patients underwent a relook flexible Retrograde Intrarenal Surgery (RIRS) and the residual stone could not be recached in one of them. Post-operative fever was noticed in 3 patients that subsided with antibiotic therapy. **Conclusion:** PCNL is an effective modality for stone clearance in ADPKD patients with excellent stone clearance and acceptable complication rates.

POD 02 – 06

Endoscopic combined intrarenal surgery for encrusted DJ stent in modified supine position: A single centre experience

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Introduction: Currently there is no single established technique for managing complex encrusted DJ (Double J) stents. We present our experience in the management of these cases by Endoscopic Combined intrarenal surgery (ECIRS) in modified supine position using conventional rigid endo-urolithotomy instruments. **Methods:** We retrospectively reviewed records of 18 cases of forgotten encrusted DJ stent, who had undergone ECIRS in modified supine position in our institute from February 2012 to June 2015. All patients had preoperative Non-Contrast computerized Tomography of Kidney-Ureter-Bladder and functional studies in some cases, when indicated. Three patients had undergone percutaneous nephrostomy for pyonephrosis pre-operatively. The patients underwent ECIRS in modified supine position. Success was defined as complete retrieval of stent along with stone or with residual stone fragments <4 mm. **Results:** Mean operative time was 184 min (Range: 125 – 200 min). 15 out of 18 patients had complete clearance. The complications (Renal pelvis injury-1, Colon injury-1, sepsis-2) were managed accordingly. Two patients required SWL and one had to undergo relook nephroscopy for residual calculus. **Conclusion:** ECIRS in modified supine position for complex cases of encrusted DJ stents with use of conventional instruments is a novel technique which provides a simultaneous antegrade and retrograde access facilitating complete removal of the encrustations and avoiding intra-operative changes in patient positioning. The need for intra-operative ultrasound and two endovision systems along with two urologists are the limitations preventing widespread adaptation of this technique.

Podium Session 3: ENDOUROLOGY AND LAPAROSCOPY - 2

POD 03 – 01

Tubeless versus standard percutaneous nephrolithotomy for Renal Stones: Analysis of data over 2 years in a single center

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Purpose: To evaluate the safety and efficacy of a tubeless percutaneous nephrolithotomy by comparing the clinical outcomes between standard PCNL and tubeless PCNL for renal stones. **Methods:** We prospectively observed patients who underwent PCNL between August 2013 and July 2015 meeting our inclusion criteria. Group 1 includes patients (146) who underwent standard PCNL and patient who underwent tubeless PCNL were included in Group 2 (88). Group 2 includes a subset of patients who underwent totally tubeless PCNL (46). The demographic characteristics, mean operative time, mean hemoglobin changes, number of percutaneous accesses, method of drainage used, analgesic requirement, mean hospitalization time, stone-free rate, and complications were collected. **Results:** There were no significant differences in the patient demographics between groups. Length of hospital stay (3 ± 0.5 vs 2 ± 0.2 days), analgesia requirements (85.2 ± 29.5 mg vs 63.2 ± 21.3 mg) for Group 1 v Group 2 showed significant differences. The stone-free rate was 88.4% v 85.6% in Group 1 and Group 2, respectively. There were no significant differences in operation duration, haematocrit change and overall complications between groups. **Conclusions:** We believe that tubeless PCNL is an acceptable, safe alternative to standard PCNL for the treatment of renal stones. Our study confirmed that tubeless PCNL has similar outcomes to standard PCNL in terms of stone-free rate without increasing complications in selected cases. Tubeless PCNL is associated with shorter hospitalization and lower analgesic requirement.

POD 03 – 02

Prospective evaluation of complications using the modified clavién grading system in transurethral resection of the prostate: A single center experience

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Objectives: Our aim was to evaluate the applicability of the modified clavién grading system in reporting and grading the severity of perioperative complications in patients with BPH submitted to TURP and to discuss its benefits. **Materials and Methods:** Data of all patients (400) operated between Sep 2013 and Aug 2015 were entered and maintained prospectively in our registry. Only new TURP cases were considered. Patients with prostate cancer at the time of the operation or incidentally diagnosed by the procedure were excluded. Basic preoperative patient data were recorded, and all complications occurring during the perioperative period (up to the end of the first month after the operation) were classified prospectively according to the modified clavién grading system. **Results:** Data of 400 men with BPH submitted to TURP during a two-year period were evaluated. Eighty four complications were recorded in 400 patients. Most of them were classified as grade I (54.1%) and II (35.2%). Higher grade complications were scarce (grade III: 5.4% and grade IV: 3%, respectively). There was two death (grade V: 2.3%) due to acute myocardial infarction (overall mortality rate 0.5%). **Conclusion:** The modified clavién grading system is non-time-consuming, easily applicable tool for grading perioperative TURP complications. Despite the inherent limitations, it seems that it may well serve as a straightforward, standardized platform allowing for sound comparisons, either longitudinally within centers to facilitate audit or among centers using similar or different technologies such as monopolar vs. bipolar TURP

POD 03 – 03

Laparoscopic bilateral nephrectomy before transplantation: indications, surgical approach and complications

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Introduction and Objective: Some patients with end-stage renal failure need bilateral nephrectomy before renal transplant. The main indications for bilateral nephrectomy are hypertension resistant to medical therapy, persistent symptomatic renal infection, vesicoureteral reflux (VUR), severe renal protein loss and occasionally polycystic kidneys. Our objective is to discuss our technique and results of simultaneous bilateral laparoscopic native nephrectomy done before a subsequent renal transplant. **Methods:** From December 2009 to December 2014, 12 patients with end-stage renal failure, who had undergone simultaneous bilateral laparoscopic native nephrectomy before a subsequent renal transplant operation, were reviewed. Review was done with particular reference to the indications, our surgical approach and complications of the procedure. Three 10 mm ports were placed in midline through which bilateral laparoscopic nephrectomy was done. The specimens, along with mobilized ureters (in patients with VUR), were dropped in pelvis and removed via 6 cm Pfannenstiel incision. **Results:** In this series of 12 patients both kidneys were removed because of chronic pyelonephritis with grade 3 or higher VUR (n = 7), glomerulonephritis with VUR (n = 3) and uncontrolled hypertension (n = 2). The median age was 34 years, BMI 26 kg/m², operative blood loss 220 ml and hospital stay of 4 days. Surgical complication seen in one patient in form of splenic injury. There was no surgical mortality. **Conclusions:** Simultaneous bilateral laparoscopic native nephrectomy before a subsequent renal transplant is feasible with low morbidity and good cosmesis. Good coordination between surgeon, and nephrologist can optimize overall outcomes to best serve the patient.

POD 03 – 04

Efficacy of preprocedural diclofenac in males undergoing DJ stent removal under local anesthesia: A double blind randomized control trial

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Introduction: Double J (DJ) stents are usually removed under local anesthesia using rigid cystoscope. Patients experience lot of pain during this procedure and also continue to have discomfort during voiding for few days. Diclofenac

suppository during flexible cystoscopy has been proven to be effective. Methods: Consecutive consenting male patients undergoing DJ stent removal under local anesthesia during 2014-15 were enrolled. Patients were randomized to receive 75 mg oral diclofenac (group A) or placebo (group B) 1 hour prior to procedure by double blind randomization. Intraurethral 2% lignocaine jelly (25 ml) was used in both groups. Pain during rigid cystoscopy, pain at first void and at 24 hours after cystoscopy was assessed using visual analogue scale (VAS) (0 to 100). Adverse reactions to diclofenac and episodes of acute urinary retention, if any, were assessed. Results: A total of 121 males (Group A [n = 62] and Group B [n = 59]) underwent stent removal. The median (IQR) VAS during the procedure in group A was 30 (30) and group B was 60 (30) (p < 0.001), at first void was 30 (30) and 70 (30) (p < 0.001) and at 24 hours postoperatively was 20 (20) and 40 (20) (p < 0.001). The incidence of epigastric pain, nausea, vomiting and acute urinary retention were comparable in the two groups (p > 0.05). Conclusion: A single oral dose of diclofenac before DJ stent removal using rigid cystoscopy under intraurethral lignocaine anesthesia decreases pain significantly during and upto 24 hours post-procedure with minimal side effects.

POD 03 – 05

Fate of long-term, indwelling, forgotten double j stents: A source of morbidity

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Introduction: To decrease morbidity of forgotten DJ stent by various endourological approaches for treating forgotten encrusted ureteral stents associated with stone formation. Materials and Methods: From 30th November 2009 to 30th June 2015, 18 patients (13 males and 5 females) presented with forgotten encrusted ureteral stents. The average indwelling time of the stent was 3.55 years (range 1 to 7 years). The procedures (pre op) included 2 URS, 2 cases of PCNL, 1 case of open pyeloplasty, 11 cases of open renal surgery for stone and DJ stenting in 2 cases for pyelonephritis. The radiological investigation included X-ray-KUB and intravenous urography to evaluate encrustation, stone burden and fragmentation. Results: The stents were entirely encrusted in 7 patients, 3 patients had encrustation confined to the kidney, 1 had encrustation of the lower coil while 7 patient had encrustation of the ureter. Percutaneous nephrolithotomy was performed in 3 cases, retrograde ureteroscopy with intra corporeal lithotripsy in 10 patients, cystolithotripsy in 1 while in 4 patient simple cystoscopic removal of the stent with minimal encrustations. All the 15 patients were stone and stent free in one admission, and ESWL with cystoscopic removal was done in 3 patients. Conclusion: Endourological management of the forgotten encrusted stents is highly successful and avoids the need for open surgical techniques.

POD 03 – 06

A comparative study of tube versus tubeless pediatric percutaneous nephrolithotomy: A single centre experience

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Introduction and Objective: Though percutaneous nephrostomy drainage has been an integral part of standard percutaneous nephrolithotomy (PCNL), tubeless PCNL has emerged as an alternative in recent times. This study is designed to evaluate the safety, efficacy, feasibility and advantages of tubeless PCNL over standard PCNL in pediatric patients. Methods: A total of 46 children aged ≤17 years (47 renal units) underwent PCNL between 2012 and 2015 at our institute. Demographics, stone characteristics and operative details were analyzed. Chi-square test was performed for statistical analysis of qualitative variables and the student's t test for quantitative variables. Results: The median (IQR) age was 14 (5) years, 25 (54.3%) were boys and median stone size was 1.6 (1) cm. Complete clearance was possible in 39 (84.8%). Tubeless PCNL was done in 17 (37%) and standard PCNL in 29 (63%) children. On comparison, they were comparable with respect to stone size, location and number and size of puncture. Mean hospital stay (2.8 vs 5.4 days; p < 0.05) and median analgesic requirement were significantly less in group A (p < 0.05). Blood loss and mean operative time were lesser in group A (p > 0.05).

Perioperative complications based on Clavien-Dindo were significantly lesser in group A (3/17 - grade 1-2 [11.76%]; grade 2-1 [5.88%]) than group B (18/29 - grades I, II, III in 12 [41.4%], 4 [13.8%], 2 [6.9%] respectively; p < 0.05). Conclusions: Pediatric tubeless PCNL is a suitable alternative to standard PCNL with favorable outcomes, near complete stone clearance and decreased morbidity, with significantly reduced postoperative length of hospitalization.

Podium Session 4: ENDOUROLOGY AND LAPAROSCOPY - 3

POD 04 – 01

Primary ureteric stone clearance: 6 Fr versus 8 Fr ureteroscope

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Introduction: The milestone of ureteroscopy (URS) from rigid ureteroscopy to semirigid and then to flexible ureteroscopy amazing!!!, because it drastically changed ureteroscopy into a single stage procedure from multiple staged procedure like prior double J stenting followed by URS. Objective: To compare the outcome and complication between 6 French (Fr) vs 8 Fr ureteroscope in primary ureteric stone clearance. Methods: Patients who undergo URS and pneumatic lithotripsy (PL) for ureteric stones are grouped into two groups based on ureteroscope used for the procedure, either 6 fr or 8 fr ureteroscope. Stone impaction, Hounsfield Units (HU) of stone, operative time, requirement for ureteral dilation, access failure, stone clearance are compared in each group. Results: Overall success of URS and PL with 6 Fr ureteroscope was 98% where as that of 8 Fr was 67% which was statistically significant. Access time, time to reach the stone, was shortened significantly with the use of 6 Fr Ureteroscope. Complications like bleeding, edema of ureteric orifice, access failure were more common with 8 Fr ureteroscope. Average operative time for stones <1 cm was reduced with 6 Fr ureteroscope, whereas that for stones >1 cm was higher with 6 Fr ureteroscope. Conclusion: Success of primary URS and PL for ureteric stones can be improved with the use of smaller caliber ureteroscope. Use of Six Fr ureteroscope gives better success with lesser complications.

POD 04 – 02

A comparative study between serial tract dilatation and one shot single step tract dilatation during percutaneous nephrolithotomy

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Introduction and Objective: During PCNL, there are two techniques of tract dilatation, firstly, serial dilatation using Alken/Amplatz dilators and secondly, single step dilatation by pneumatic balloon dilators which are expensive. To simplify single-step dilation of access tract, a technique is passage of the final semirigid plastic dilator without prior dilatation by smaller dilators. Objective is to assess feasibility and morbidity of single-step acute dilation, named "one-shot" technique compared with serial dilatation. Methods: Patients admitted for PCNL at CNMC, Kolkata from 1.10.2013-30.6.2015 divided randomly into 2 groups. In Group A, serial dilatation and in Group B, one-shot dilatation done. Total operation time, post-operative hospital stay, access-tract dilatation time, X ray exposure time, postoperative pain score by VAS, decrease in Hemoglobin and packed cell volume, blood transfusion rate, stone free rate and procedural success rate are noted. Complications like urine leak, sepsis, requirement of repeat procedure documented. Data analysed by chi-square and student's t test. Results: 76 patients in Group A, 68 in Group B included and 19 excluded as redo-PCNL required. Though mean duration of access-tract dilatation time, X-ray exposure time and mean total operative time were less in Group B than A (3.5 vs 4.8, 4.5 vs 5.7 and 72 vs 85 minutes, respectively), difference between these and other variables were statistically insignificant (p value > 0.05). Conclusion: Both one-shot and serial tract dilatation are safe and feasible procedures for tract formation in PCNL, but one-shot has a shorter access time and X-ray exposure time without increased complications.

POD 04 – 03**Is there a role for semi-rigid ureteroscopy in treatment of solitary renal pelvic calculus in the era of flexible ureteroscopy?****Mohan BA, Pradeep K, Arul M, Viswaroop SB, Ganesh Gopalakrishnan, Kandasami SV**

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Introduction and Objective: Shockwave Lithotripsy and Flexible Ureterorenoscopy (FURS) are the recommended treatment options for renal pelvic calculus (RPC) <2 cm. However Semi-rigid Ureteroscopy (SURS) is done before FURS in many centers. We performed a retrospective study to assess outcome of SURS for RPC, need for FURS and its predictive factors. **Materials and Methods:** The medical records of patients with RPC measuring 10-25 mm who underwent SURS or FURS between January 2014 and December 2014 were analysed. Pregnancy, Children, pre-stented cases and presence of calyceal calculi were excluded. 56 patients were included in the study. All cases were done by endourologists with more than 10 years of experience. 6/7.5 Fr SURS was attempted in all patients under General anesthesia. Holmium laser was used for lithotripsy. SURS was said to be successful if the fragments were less than 2 mm and FURS was not used. FURS was used if SURS was incomplete or failed. **Results:** SURS was successful in 34 patients (61%). FURS was needed in 22 patients (39%) due to inaccessible stone in 16 cases (failed SURS) and migration of stone or fragments in 6 cases (incomplete SURS). Male gender, Height >165 cm and duration of symptoms <7 days were statistically significant ($p < 0.05$) factors for FURS requirement. Age, Body Mass Index, laterality and stone size were not statistically significant. 5 patients (9%) in SURS group had post-op fever. **Conclusions:** In experienced hands, SURS is an effective treatment option for RPC <2.5 cm in a majority of cases. Male gender, Height and duration of symptoms are predictive factors for need of FURS.

POD 04 – 04**"Laparoscopic nephroureterectomy with cuff of urinary bladder" by pneumovesicum method strictly maintain oncological principle****Bhuiyan NI**

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Introduction: Nephroureterectomy with cuff of urinary bladder is the treatment for upper tract Transitional cell carcinoma. To maintain oncological principle it is important to close lower ureter first. There are so many methods of closing the lower ureter. Among those methods Pneumovesicum approach have superiority to close lower ureter for keeping oncological principle intact. Here we reported initial experiences of Pneumovesicum approach to en-bloc laparoscopic nephroureterectomy with bladder cuff excision for upper tract urothelial in comparison to other method. **Methods:** From January 2010 to July 2014, 9 patients with upper tract urothelial cancer were underwent Pneumovesicum approach for Laparoscopic Nephroureterectomy with bladder cuff. 9 patients were underwent incision around the ureteric orifice by Collins knife. For Pneumovesicum approach Laparoscopic ports were inserted into the bladder via a suprapubic route, and carbon dioxide Pneumovesicum was induced. First ureteric orifice of dissection site closed by vicryl running suture then Laparoscopic dissection of the lower ureter and excision of the bladder cuff were performed. The bladder defect was closed by laparoscopic suturing, and standard Laparoscopic Nephroureterectomy was followed. Those cases where periureteric bladder cup dissected by Collins knife lower ureter pushed outside bladder then conventional laparoscopic Nephroureterectomy performed after clipping lower ureter. **Results:** Age range was 50-75 years. Among the 18 patients 10 had renal pelvic tumor, 6 had upper ureter tumor, 2 had midureter tumor. 14 patients had T1 and 4 patients had T2 diseases. All of the patients had Grade II (GII) diseases. Average operation time was 180 minutes. Average hospital stay was 3 days. Analgesic requirement was single dose of inj. Pethidine as per body weight. One patient develop urinary bladder Tumor in follow up period among those lower ureter dissected by Collins knife. No significant per operative and post operative complication were observed. **Conclusion:** Pneumovesicum approach for

Laparoscopic Nephroureterectomy with bladder cuff is safe and effective. Pneumovesicum approach strictly maintain the oncological principle. Hospital stay and return to normal activity is faster than open procedure. Study of large number of cases in different institutes are required for further comment.

POD 04 – 05**Comparison of holmium laser enucleation of prostate with transurethral resection of prostate for large prostatic adenoma (upto 100 grams)****Pandey Himanshu, Sood Swapan, Agrawal Suresh**

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Introduction and Objective: Holmium laser enucleation of prostate (HoLEP) is an established treatment for very large prostatic adenomas of size >100 grams. Still expertise and availability are issue associated with HoLEP. For benign glands of size up to 100 grams transurethral resection of prostate (TURP) and HoLEP both are viable options. We tried to compare the treatment efficacy and safety of HoLEP and TURP in benign prostatic glands weighing up to 100 grams. **Methods:** We retrospectively analyzed data of HoLEP and TURP done at our center. Prostate glands of size upto 100 grams treated with either of these modalities were included in the study (75 in TURP group and 80 in HoLEP group). Peri and post-operative parameters like laser, morcellation, electrocautery and catheter time, weight of removed tissue, hospital stay, blood transfusion, flow rates, post void residual urine volume, International Prostatic Symptom Score (IPSS), re-catheterization and re-operation rates, urinary tract infection, continence, stricture, etc. were evaluated. **Results:** HoLEP appeared superior to TURP with regard to mean hospital stay, mean catheter time and amount of tissue removed. Fewer adverse events were seen in HoLEP group. Both HoLEP and TURP showed significant improvements in flow rates, IPSS and quality of life on long term follow up. **Conclusions:** HoLEP is superior to TURP for relieving bladder outlet obstruction in benign glands of upto 100 grams size. Earlier catheter removal and lesser hospital time are benefits with HoLEP. More tissue removed with HoLEP but operative time was longer for HoLEP.

POD 04 – 06**Primary obstructive megaureter in adults presenting as urolithiasis: Total laparo-endourological management****Pankaj Wadhwa**

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Introduction: Primary Obstructive Megaureter (POM) with urolithiasis is an uncommon entity. Stones in such cases may be variably located in the kidney/ureter, maybe multiple and mobile. Management involves stone clearance and reconstruction, simultaneously or staged manner. Herein is an account of my experience with treating such cases with complete endourological and laparoscopic techniques. **Patients and Methods:** From August 2009 till June 2014, 4 adult patients (3-unilateral; 1 Bilateral) with POM presenting with urolithiasis underwent complete endourological stone retrieval with laparoscopic ureteric reimplantation. 2 patients required prior PCNL with antegrade flexible ureteroscopy due to mobile reno-ureteral calculi; in other 2 cases calculi were retrieved at laparoscopy, additionally RIRS was performed via an exteriorized ureter prior to reimplantation in 1 case. In 1 case simultaneous laparoscopic nephroureterectomy (NUT) was performed for nonfunctioning contralateral renal unit secondary to POM. Ureteric reimplantation using modified Lich-Gregoir technique with extracorporeal excisional tailoring performed in 3 cases; transvesical pneumovesicum technique reimplantation in 1 case. **Results:** Mean age of the patients was 23.7 years (range: 18-33). Mean operative time was 270 minutes. Mean hospital stay was 5.2 days. There was no significant intraoperative complications. 1 case developed pyrexia related to basal atelectasis, which responded to antibiotics. Stent removal was performed at 4 weeks, followed by DTPA scan at 8 weeks. **Conclusion:** Total endourological and laparoscopic management of POM is a challenging endeavour that may need use of all the endourological armamentarium available to achieve stone clearance and experience in advanced urologic laparoscopic procedures, especially intracorporeal suturing skills.

Podium Session 5: URO-ONCOLOGY AND ADRENAL DISEASES – 1

POD 05 – 01

Robot assisted retroperitoneal lymph node dissection of post chemotherapy residual mass: A single center retrospective study of 9 patients

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Introduction: To evaluate the outcome of Robot assisted retroperitoneal lymph node dissection (RA - RPLND) in 9 patients of carcinoma testis with post chemotherapy residual retroperitoneal mass at our institute. **Patients and Methods:** A total of 8 patients underwent RA - RPLND between Jan 2012 to August 2015 in our Institute. Data was collected retrospectively regarding demography of patients, tumor characteristic and surgical and pathological outcomes. Short term and medium term outcomes were also recorded. **Results:** RA-RPLND was successfully completed in all 9 patients. Mean operative time, estimated blood loss and length of hospital stay were 207.22 min, 208.88 ml and 3.4 days respectively. The mean yield of lymph node was 26.87, and matted lymph nodal mass was found in one patient. Histopathological examination revealed necrosis in 6 patients whereas mature teratoma was noticed in 3 patients with one of these showing sarcomatoid differentiation too. After mean follow up period of 19 months, no retroperitoneal recurrence was reported. Three patients developed chyle leak in immediate post-operative period, of these two patients were managed conservatively and another one underwent exploratory laparotomy and ligation of cysterna chyli. **Conclusion:** RA-RPLND is safe and feasible for post chemotherapy residual mass with acceptable complication rate. Ours is a largest reported series till date. In literature authors have mentioned series of 7-8 cases. Though larger studies are required to establish its diagnostic and therapeutic utility. **Key words** – Testicular cancer, Retroperitoneal node dissection, RA – RPLND, Post chemotherapy mass

POD 05 – 02

Association of histological diagnosis of testicular tumours with testicular ultrasound and tumour markers

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Introduction and Objective: We conducted a study to look at the association of histological diagnosis of testicular cancer, ultrasound examination (US), tumour markers and staging CT (CT) in newly diagnosed testicular cancers. **Methods:** Retrospective analysis of patients between January 1994 and December 2014 was conducted in our District General Hospital. The mean age was 38.5 years (range 18 to 75). Of 119 patients with newly diagnosed testicular cancers, 105 had complete data and included for analysis. **Results:** 54 patients had seminoma (S), 34 non-seminoma (NS), 10 mixed tumours (S+NS) and 7 others (lymphoma, multiple myeloma). In the 62 patients with reported heterogeneous characteristics (HET) on US, a diagnosis of S (N = 40) was more likely than NS (N = 22) (P < 0.05). Seminoma patients are also more likely to have HET (N = 40) than hypoechoic (HYPOEC) (N = 20) on US (P = 0.01). However, for NS patients this difference (22 v 11) was not significant (P = 0.06) (Figure 1). In multivariate analysis of histology (S/NS/Mixed/Others), ultrasound appearance (HET/HYPOEC), AFP and β HCG level, there was a significant correlation of AFP levels (P < 0.005) (Figure 2). Univariate analysis of AFP level with histology type, cancer stage and US appearance, showed correlation of more advanced disease only in NS (P < 0.01). **Conclusion:** In contrast to previous studies, our study showed that seminomas are not primarily hypoechoic on US. Heterogenous appearance can equally be seminoma or non-seminoma. Regarding testicular tumour markers, higher AFP levels are more likely in NS where this also points to a higher cancer stage.

POD 05 – 03

Prospective non randomised clinical study of transperitoneal (LRN) versus retroperitoneal laparoscopic radical nephrectomy (RRN)

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Objective: To compare transperitoneal versus retroperitoneal laparoscopic radical nephrectomy for renal tumor. **Materials and Methods:** Between March 2014 and July 2015, 53 patients were prospectively randomised to undergo radical nephrectomy. Patients with disease stage T1a to T2aN0M0 were included in the study. Patient with BMI >35 or a history of prior major abdominal surgery were excluded. **Results:** All procedures were technically successful with need for hand assistance in one case of retroperitoneal nephrectomy and open conversion in one case of transperitoneal nephrectomy to control the IVC. As compared to transperitoneal approach, retroperitoneal approach was associated with a shorter time to renal artery control (105.33 min versus 19.73 min), shorter time to renal vein control (126.66 min versus 34.78 min) and shorter total operative time (239.6 min versus 121.95 min). Total blood loss was significantly lower in retroperitoneal group (68.91 ml versus 144.66 ml). Postoperative analgesia requirement, post surgery hospital stay were also less in retroperitoneal group (2.47 days versus 3.8 days). Pathology reveals clear cell carcinoma in all cases with no positive surgical margin in both groups. On follow up, one patient in retroperitoneal group develop liver metastasis and died. One patient in transperitoneal group also developed recurrence of tumor. **Conclusions:** Laparoscopic radical nephrectomy can be performed with transperitoneal or retroperitoneal approach effectively. Control of vessel, total operative time and analgesia requirement is less in retroperitoneoscopy. Otherwise both approach are same in terms of patient outcome.

POD 05 – 04

Outcome analysis of robotic cystoprostatectomy patients in a tertiary care uro-oncology centre

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Introduction and Objective: Radical Cystoprostatectomy and Extended Lymph Node Dissection are standard treatment approach for Muscle Invasive Bladder Cancer and High risk Non muscle Invasive Bladder cancer. The standard approach is open but often associated with high perioperative complication rates. The present study was conducted with an objective to critically analyse perioperative and post operative outcome of Robotic cystoprostatectomy cases in our Institute and to know if there is any difference with open cases published in other studies. **Methods:** A total of 17 Cystoprostatectomy cases were included in this study. Data was collected from Medical records. Data was plotted in Microsoft Excel and analysed by SPSS software. Comparison was made with other Published series. **Results:** All operated cases in this study were males with average age of 58.64 years and average weight of 72.29 kgs. Eight patients were ECOG performance score 1 and nine were ECOG 2. Average operative time in study was 479 +- 10 minutes and average blood loss was 207 +- 30 ml. Only two patients required intra operative transfusions. Ileal conduit was done in 6 cases and neobladder in 11 cases of which 7 cases had total intracorporeal neobladder. On Post operative period 2 patients had grade 1 complications and 10 patients had Grade 2 complications. No patient had grade 3 or above complication. On 1 year follow up no death was recorded. **Conclusion:** A comparison with other published studies in open cases showed lower complication rates including no grade 3, 4 complications, lower blood transfusion and no mortality on this study proving its usefulness.

POD 05 – 05

pTa high grade urothelial bladder cancer: An Enigma? Audit of current practises and outcomes

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Introduction and Objective: High grade pTa bladder tumor is being increasingly reported with newer (WHO 2004) classification. It is a heterogeneous group with differing biological potential as previously grade 2 & even small grade 3 focus are being reported as high grade. Aim of study was to assess outcomes of second Transurethral resection of tumor (TUR) and factors affecting recurrence free survival. **Methods:** It is a single center retrospective study of patients with pTa high grade lesion at first TUR spanning 2006-2014.

Exclusion criteria included: concomitant higher stage lesion, synchronous upper tract lesion, non-representative TUR biopsy. Results: Of 151 patients, 116 patients satisfied inclusion criteria. 47 (40.5%) had second TUR. Indications were high grade lesion in 41 and incomplete resection in 6. Eight out of 41 had positive biopsy (3 had CIS, 3 pTa lowgrade lesion and 3 pTa high grade lesion) on second TUR. Of 6 (incomplete resection), one upgraded to pT1. Median recurrence free survival was 40 (95% CI 23.7-56.2) months for study group. Multiple tumors (>2) had higher chances of recurrences with HR of 3.8 (CI 1.1-12.9). Patients who received maintenance BCG showed trend ($p = 0.57$, Not significant) towards lesser recurrence. Second TUR, Immediate intravesical Mitomycin C, induction BCG, history of previous TCC did not affect recurrence free survival. Conclusion: Second TUR detects residual tumor in 20% patients. Patients with more than one tumor had higher chances of recurrences. We propose the need to sub-classify this group into high risk and low risk subgroups and study them prospectively.

POD 05 – 06

To evaluate the role of preoperative staging MRI in diagnosing extracapsular extension and seminal Vesicle in prostate cancer

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Introduction and Objective: In prostate cancer, preoperative identification of seminal vesicle invasion (SVI) is important for staging and prognosis and may modify treatment selection and planning. The purpose of this study was to compare MRI and surgical pathology, to determine the accuracy of delineating SVI and ECE in patients prostate cancer for. **Materials and Methods:** This was a retrospective, single-institution study. Patients with histologically diagnosed prostate carcinoma had staging MRI imaging before radical prostatectomy. Results were correlated with RP histopathology. Results: 105 patients underwent RP. Out of 78 (74.76%) who had T2 disease on staging MRI, 33 (42.3%) patients had upgrading of T-stage on final histopathology to T3a (48.48%) and T3b (51.51%). None had lymphnode metastasis. 27 (25.71%) patients in study group who were diagnosed to have either seminal vesical (66.66%) involvement or ECE (14.8%) on staging MRI histopathology had organ confined disease on radical prostatectomy and no biochemical failure on subsequent follow up. The sensitivity, specificity, positive negative predictive value to predict established ECE was 30%, 93.3% and 72.7% respectively. The sensitivity and specificity to diagnose positive seminal vesical invasion was 63.6% and 92.9% respectively. Conclusion: In routine clinical practice staging MRI has very limited clinical value in predicting ECE and SVI

Podium Session 6: URO-ONCOLOGY AND ADRENAL DISEASES – 2

POD 06 – 01

Narrow band imaging cystoscopy in non-muscle-invasive bladder cancer: A prospective comparison to the standard white light cystoscopy

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Introduction: The standard endoscopic diagnosis for non-muscle invasive bladder cancer (NMIBC) with white light imaging (WLI) suffers frequently unsatisfactory results leading to residual lesions being left behind. **Objectives:** To evaluate the diagnostic accuracy of cystoscopy assisted by narrow band imaging (NBI) compared with standard WLI for NMIBC. **Materials and Methods:** We included 156 patients with bladder cancers in a prospective, randomized controlled manner, who underwent transurethral resection of bladder tumor (TURBT) at our center from May 2013 to July 2015. Eighty two patients underwent TURBT using only WLI (Group I) and 74 patients underwent WLI and complete resection under WLI followed by NBI and resection under NBI guidance (Group II) if detected. Results: In 17% patients (13 out of 74) in Group II in the study revealed extra lesions or positive resection margin on NBI, out of which 7 were biopsied and 6 underwent only fulguration as per surgeon's discretion. Out of these seven

patients, four were positive for bladder cancer on biopsy. Conclusion: NBI potentially offers an easier to use technology to identify mucosal hyper-vascularity which should translate into the visualization of occult bladder tumors. Finding these bladder lesions that typically would not have been seen on WLI should result in improved bladder cancer related survivals. However, more multicentre, prospective and randomized studies are needed to compare its impact with WLI TUR in terms of residual tumor, recurrence and progression of bladder tumors.

POD 06 – 02

Orthotopic neobladder: The better option in advanced bladder cancer

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Aim: To review the outcomes of the orthotopic neobladder reconstruction in our institution. **Materials and Methods:** The study spanned 12 years from 2003 to 2015. Patients who underwent an orthotopic neobladder reconstruction were included. Data was retrieved from our electronic database. Results: A total of 21 men had radical nerve sparing cystoprostatectomy and an orthotopic neo-bladder construction during the study period. Mean age was 50.3 years (SD 10.5). Pre-operative diagnosis was muscle invasive TCC bladder (T2) in five, T1 High grade with CIS in fourteen and post BCG recurrence in one. One had a rhabdomyosarcoma. Three had a modified Studer pouch, two had a 'W'-pouch, while the rest had an 'N'-pouch constructed. Final biopsy revealed upstaging from T2 to pT3 in 4 patients (19%) and from T1 to T2 in four patients (19%). The maximum number of nodes removed was 23. Twenty of twenty one had node negative disease. Nineteen (90.5%) men were continent at discharge, 2 (9.5%) gained continence with Kegel's exercises and was continent at the 6th month review. All twenty one had nocturnal penile tumescence. Fifteen (71.4%) had erections without the need of PDE-5 inhibitors. Six (29.6%) had erections with sildenafil. Mean follow up was for 4.8 years (SD 3.6). Three men expired (14%). One developed lung metastasis and one had local recurrence (was pT3a at cystectomy) and was on adjuvant chemotherapy. Eighteen (85.7%) were tumour free at last review. All had daytime and night-time continence. Four patients reported occasional stress leak (once or twice a month). Pad usage among those with stress leak was rare about one pad a month when travelling. Average flow rate was 23.4 ml/sec (SD 14.4), voided volume 268.3 ml (SD 79.1), PVR 32 (SD 25). Conclusions: Orthotopic neobladder reconstruction following a radical nervesparing cystoprostatectomy, has excellent outcomes in a carefully selected patient group.

POD 06 – 03

Emerging role of 68Ga-PSMA PET-CT imaging in the Evaluation of prostate cancer: Preliminary analysis of a single center experience

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Introduction: Prostate specific antigen (PSA) and prostate biopsy do not give an accurate indication of the spread of the disease. There is also a clinical dilemma on the requirement of biopsy in patients presenting within an uncertain window, based on PSA values and ultrasound investigation. 68Ga-PSMA PET-CT scan is emerging as an ideal tool for the accurate assessment of disease status in patients. 68Ga-PSMA PET scan is available only three centres in south India. In this study we present our experience with 68Ga-PSMA for the detection, staging and recurrence evaluation of PCa. **Methods:** 76 patients underwent 68Ga-PSMA PET-CT imaging for various indications. The indications were primarily for lesion characterization in cases of clinically suspected prostate cancer, initial staging work up of biopsy proven prostate cancer, restaging and recurrence evaluation in post treatment cases with biochemical or clinical suspicion of disease recurrence. Results: 76 males with a median age of 68 years with a diagnosis or clinical suspicion of prostate cancer were included in this study. 24 patients with a clinical suspicion of prostate cancer had a median PSA value of 9.39. 10 patients had a focal intense uptake in the prostate gland suggestive of prostate carcinoma. They have been suggested PET/CT based TRUS guided biopsy. The remaining 14 patients had no abnormal focal tracer uptake in the prostate gland, hence prostate biopsy have been avoided in them. They have been put on a scheduled follow up. 20 patients of recently diagnosed adenocarcinoma of prostate have been

referred for initial staging work up. The median PSA value was 30.6. All the 20 patients had intense tracer uptake in prostate gland. Seven patients had lymph nodal metastases. 32 patients of prostate cancer underwent PSMA scan following after some form of therapy. The median PSA value was 6.2. In 28/32 (87.5%) patients, site of disease involvement could be detected. 18 out of 32 cases have local recurrence in the prostate gland or the prostatic bed. Conclusions: 68Ga-PSMA PET/CT scan helps in lesion characterization, thereby guiding biopsy site in positive cases as well as avoiding unnecessary biopsy in negative cases. 68Ga-PSMA PET/CT offers a single stop investigation in the initial staging work up of diagnosed prostate cancer patients. Our results confirm that 68Ga-PSMA PET/CT is an excellent tool for assessment of recurrent prostate cancer. It is equally good in identifying lesions in the prostate gland, lymph nodes (regional and distant sites) and in the skeleton.

POD 06 – 04

Quality of life assessment in patients of radical cystectomy with ileal conduit

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Introduction and Objective: Bladder cancer is a lethal disease which accounts for 3% of all cancer deaths. Recent improvements in surgical techniques have contributed to the patient's acceptance of major surgery like radical cystectomy and urinary diversion. With the possibility of urinary diversion options with comparable cancer control and complication rates, quality of life becomes an important factor. **Objective:** To assess the quality of life in patients who have undergone surgery for Carcinoma bladder in the form of radical cystectomy and ileal conduit. **Methods:** Prospective observational study with statistically appropriate sample size of 50. Patients of Radical cystectomy and ileal conduit were given validated FACT-BI Questionnaire to answer about post operative quality of life in terms of physical, mental, social, emotional and cancer specific well being at least 1 year post surgery. **Results:** Mean physical well being (PWB) subscale score - 24.08 + 4.67 (range 0-28). Mean Social Well Being (SWB) subscale score - 23.52 + 4.35 (range 0-28). Mean Emotional Well Being (EWB) subscale score - 20.06 + 5.09 Mean Functional Well Being (FWB) subscale score - 21.84 + 6.01 (range 0-28). Mean bladder cancer subscale score - 36.44 + 5.72 (range 0-48). The mean Trial outcome index score - 82.16 + 13.5 (range 0-104). FACT-G score - 89.50 + 15.88. The mean FACT-BI total score - 125.94 + 19.04. **Conclusions:** After assessing all aspects of quality of life for a particular type of diversion like ileal conduit, surgeons as well as patients can take a decision about the diversion of choice for them. Conventional diversions like ileal conduit still provides good quality of life and is most preferred of all.

POD 06 – 05

Germ cell tumour of the kidney: Case report

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Background: Germ cell tumour of kidney is very rare and described in paediatric population. It is often believed to be a deposit of a burnt out primary in the testis with retroperitoneal lesion. Here we describe a rare case of germ cell tumour of the kidney without any occult primary in the testis. **Case Report:** Young man of Middle Eastern origin presented with pain in the left loin and fever. Investigations revealed left hydronephrosis with intra renal solid areas and a stone suggestive of secondary tumour in an obstructed kidney. There were lymph nodes in the para aortic area. Open radical nephrectomy was performed along with a diagnostic lymphadenectomy. Post operatively patient recovered well. Histopathology revealed germ cell tumour most likely of yolk sac origin. Post operative alpha fetoprotein was >2000. Subsequent Ultrasound testis did not reveal any foci or tumour or scar areas. In view of the current diagnosis, BEP chemotherapy has been initiated. **Conclusion:** Germ cell tumour of the kidney, for the first to our knowledge, is described in adult population.

POD 06 – 06

Incidentally detected adenocarcinoma prostate in transurethral resection of prostate specimens: A hospital based study

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Introduction and Objectives: T1 or incidental prostate cancer is clinically inapparent tumour, neither palpable nor visible by imaging. This study was to assess the rate of incidentally detected prostate cancer in TURP specimens in our hospital and correlate it with various parameters. **Methodology:** This was a retrospective study of the biopsy of patients undergoing TURP for BPH during a period of 5 yrs. Patients with elevated age adjusted PSA, abnormal DRE, documented UTI and proved adenocarcinoma prostate (CaP) were excluded. The total weight of prostatectomy specimen, occurrence of CaP in the chips, percentage of total tissue resected showing malignancy and Gleason's grading were recorded. Statistical analysis was done using MedCalc 14.8.1. **Results:** A total of 597 patients were included. The age of patients ranged from 41 to 90 years (mean 66.79 ± 8.7 years). The incidence of occult CaP in the study group was 5.2% (31/597), of which 8 belonged to T1a and 23 belonged to T1b. The age group 70–79 years had the maximum incidence of incidental CaP (58.06%) while, 40–49 years had no patients with CaP (P = 0.001). The clinical grading of prostate did not have a bearing on the incidence of occult CaP. The incidence was highest when the total weight of resected gland was <20 g (P = 0.15) **Conclusions:** The incidence of occult CaP in patients undergoing TURP for BPH was found to be low in our study. The age of the patient was a positive predictor for incidence of occult prostate cancer.

Podium Session 7: URO-ONCOLOGY AND ADRENAL DISEASES – 3

POD 07 – 01

Is low dose intravesical Bacillus Calmette Gue'rin is as effective as standard dose: As an immunotherapy in non muscle invasive bladder cancer? A randomised study

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Aims: To assess the efficacy, safety and feasibility of 1/3rd (40 mg) of intravesical BCG as immunotherapy in NMIBC (Non Muscle Invasive Bladder Cancer). **Materials and Methods:** A Prospective, randomized study was carried from January 2014-June 2015. Patients having completely resected intermediate or high risk non-muscle invasive urothelial carcinoma of urinary bladder were selected. Patients were randomised to one of two treatment groups: Group – A: 1/3rd dose of BCG (Bacillus Calmette Gue'rin) (40 mg) with 1 year of maintenance, Group – B: Standard dose of BCG (120 mg) with 1 year of maintenance, BCG was given once weekly for 6 weeks followed by three weekly instillations at month 3, 6, and 12. Recurrence of bladder tumor, progression of bladder tumor, toxicity of intravesical BCG was assessed. **Result:** Total 74 patients were included in this study and randomized in two groups. Group A & group B had 40 & 34 patients respectively. Group A had 30% (n = 40) & group B had 35.3% (n = 34) intermediate risk patient. Mean follow up was 9 months (range: 3 to 18 months). Recurrence of tumors in Group A was 2 (5%) both in high risk group and in group B was also 2 (5.88%) but each one in two risk category (p > 0.05). There was one patient with progression of tumor in high risk patient in group A (p > 0.05). Toxicity of intravesical BCG in both groups was also comparable. **Conclusion:** 1/3rd dose (40 mg) of intravesical BCG in treatment of intermediate and high risk group of NIMBC is efficacious, safe and feasible.

POD 07 – 02

Study of arsenic associated bladder cancer in West Bengal

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Introduction and Objective: Arsenic is one of the most common environmental risk factor for developing urinary bladder carcinoma. In West-Bengal about 34 million people are affected by ground water

contamination of arsenic. In present study, we have explored the role of arsenic in development, progression and prognosis of the disease in West Bengal. **Methods:** All patients admitted in the urology ward of our hospital with urinary bladder cancer and didn't receive any treatment preoperatively, were included in the study. Freshly operated bladder tumor tissue and 5 ml blood was collected and sent for arsenic level, histopathological and immunohistochemical (Ki-67) analysis. Arsenic concentration of tumor tissue was measured by the spectrophotometer using Bis (thiophene-2-aldehyde) thiocarbohydrazide (BTATCH) reagent. Determination of proliferative index of tumor tissue was done by immunohistochemical analysis of Ki-67. Statistical analysis was done to determine the association of the tissue arsenic level with various clinicopathological parameters of disease including survival. **Results:** Arsenic was detected in 60% of samples analyzed with an average concentration of 30 µg/gm. Tissue arsenic concentration also showed positive association with clinical stage and histopathological grade of tumor. Significant high level of Ki67 expression was seen in arsenic positive bladder tumors compared to that of arsenic negative samples. **Conclusions:** Arsenic is a major cause of urinary bladder cancer in West Bengal and ground water is the main source. Arsenic positive bladder cancer seem to be more aggressive than that of arsenic negative one and this might have clinical implication for better management of the disease.

POD 07 – 03

Short term outcome of robotic radical prostatectomy at a newly commissioned robotic surgery program

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Introduction: RRP is a procedure performed with a surgical robot that provides improved magnified vision to achieve complete excision of tumor, provide good urinary continence post-operatively, and maintain the ability to have erections after the surgery, if present prior to surgery while minimizing surgical incisions. **Materials and Methods:** A prospective analysis of 30 patients who underwent RRP from february 2014 to may 2015 at IAH, New Delhi using da Vinci Si robotic surgical system (Intuitive Surgical, Sunnyvale, CA, USA) were done. Prospective data collection included clinical history, basic demographics (height, weight and BMI), PSA levels, clinical stage and Gleason grade, IIEF-5 score. Variables assessed during RRP were operative duration, estimated blood loss (EBL) and complications if any. Post operative variables assessed were hospital stay, catheter time, pathology, PSA level, return of continence and potency. **Results** The mean duration of RRP was 250 min; all procedures were successful, with no intraoperative transfusions. The mean EBL was 123 mL; 70% of patients were discharged home by third day after RRP. The mean duration of catheterization was 13.9 (10–20) days. The positive margin rate was 43.3% for all patients; i.e. 21.4% for T2, 77% for T3. Radiotherapy was given to 20% patients with significant positive margins. The overall biochemical recurrence free (PSA level < 0.1 ng/mL) survival was 93.3% at mean follow-up of 6 months. There was complete continence at 3 and 6 months in 76.6% and 86.6% of patients, respectively. At 6 months 40% of patients were potent. **Conclusion:** RRP is a safe, feasible and minimally invasive alternative for treating prostate cancer. The initial results at our institution, wherein a robotic surgery program has been recently commissioned, are similar to various published series.

POD 07 – 04

The impact of narrow band imaging in the detection of bladder tumour in transitional cell carcinoma of the bladder: A randomized crossover controlled trial from a tertiary care centre in India

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Introduction: Complete trans-urethral resection of all visible tumours is the cornerstone of treatment of bladder cancer. White light (WL), although used as the standard light source, has limited specificity and sensitivity. The study aims to determine the impact of narrow band imaging (NBI) in detecting tumours during resection of bladder cancer. **Materials and Methods:** This was a single centre prospective interventional study with a

randomized control crossover trial design. Patients with bladder tumours were randomized into two arms where they were resected under WL first followed by NBI in ARM A, or NBI followed by WL in ARM B. The number of additional tumours detected by the second light source, in both arms, was analyzed. 110 patients were randomized. **Results:** Nine additional tumours were detected by the second light source, all of which were detected in ARM A (WL followed by NBI). Therefore NBI had an odds ratio of 23 in detecting additional tumours. Of the thirteen instances of Carcinoma in situ (CIS) detected in all the resections during the study, 10 were detected by NBI (Odds Ratio 1.3). **Conclusion:** Narrow band imaging is superior to white light in the detection of tumours, therefore allowing a more complete resection. NBI is also superior to WL for detecting carcinoma in situ.

POD 07 – 05

Radical cystectomy and urinary diversion: A single center experience

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Introduction: We present the outcomes of patients treated with radical cystectomy and pelvic lymphadenectomy in our center. **Materials and Methods:** A total of 70 patients underwent radical cystectomy (RC) for bladder cancer from Feb 2012 till Feb 2015. Of these, 54 patients with primary transitional cell carcinoma of bladder underwent RC with bilateral pelvic lymphadenectomy and ileal conduit with a curative intent. Four cases radical cystoprostatectomy with ileal conduit for squamous cell carcinoma and 12 cases with orthotopic urinary diversion. The clinical course, pathologic characteristics and long-term clinical outcomes were evaluated in this group of patients. **Results:** The follow-up was 6 to 36 months. There were 2 (4.3%) perioperative deaths and 6 (13%) early complications. The recurrence-free survival (RFS) and overall survival (OAS) were 64% and 90% at 5 years. The RFS and OAS were significantly related to the pathological stage and lymph node status with increasing pathological stage and lymph node positivity associated with higher rate of recurrence and worse OAS. A total of 16 patients (34.7%) developed bladder cancer recurrence. Of these, 7 (15.2%) developed local pelvic recurrence and 9 patients (19.5%) developed distant recurrence. Pathological subgroups include 24 patients (52.1%) with organ-confined node-negative tumors, 10 (21.7%) with extravesical node-negative tumors and 12 (26%) with lymphnodal involvement. **Conclusion:** The clinical results reported from this group of patients demonstrate that radical cystectomy with ileal conduit or orthotopic neobladder in selected patients provides good survival results for invasive bladder cancer patients with low incidence of pelvic recurrence.

POD 07 – 06

Adrenal and extra adrenal pheochromocytomas presenting as ventricular arrhythmias: A report of three cases

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Introduction: Patients with pheochromocytoma are known to have various cardiac complications including arrhythmias, heart failure, myocardial infarction and cardiomyopathy. QT prolongation has been reported in these patients and can predispose to serious ventricular arrhythmias resulting in syncope and cardiac death in the worst cases. **Case Report:** We report here three cases of pheochromocytoma presenting with ventricular arrhythmias, among them two had torsades de pointes and third patient had frequent ventricular premature complex and non sustained ventricular tachycardia. All the patients were treated with surgical removal of the tumor with relief of symptoms. **Conclusion:** QT prolongation can occur in patients with pheochromocytoma and may give rise to dangerous arrhythmias like torsades. It would be advisable to evaluate patients with QT prolongation who also have high blood pressure to exclude secondary causes of hypertension. Our cases illustrates that pheochromocytomas can be a rare, reversible cause of torsade de pointes. Only a few case reports are available in literature.

Podium Session 8: UROLITHIASIS – 1

POD 08 – 01

Predictors of the outcome of ESWL for lower ureteric stones

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Introduction: The lifetime prevalence of kidney stone disease is estimated at 1% to 15%, with the probability of having a stone varying according to age, gender, race, and geographic location. 50% of first-time stone formers who do not receive treatment have another stone within 5 years. Of the various treatment options available, extracorporeal shockwave lithotripsy (ESWL), has become the most popular noninvasive intervention for stone disease. However, all urinary stones are not easily fragmented by ESWL, and the success rate of ESWL depends on multiple factors, such as stone size, location, and composition. Therefore, it would be useful to be able to predict the factors for successful ESWL. Most studies have shown that the consistency, size, shape, location, and attenuation value of urinary calculi measured in Hounsfield unit (HU) density on NCCT and body mass index may be predictors of ESWL success, as determined by the stone-free rate (SFR). **Objective:** The aim of the study was to evaluate the efficacy of extracorporeal shock wave lithotripsy (ESWL) for distal ureteric calculi and to determine variables that could affect the outcome results. **Materials and Methods:** This prospective study was performed in Department of Urology, during the period from January 2014 to december 2014. A total of 70 patients treated by ESWL for radio-opaque distal ureteral stones were included in this study. The outcome of treatment was evaluated after 3 months. The patients clinical and radiological findings, as well as stone characteristics, were reviewed and correlated with the stone-free rate. **Results:** Out of 70 patients, 48 patients (68%) were stone-free. From a univariate analysis only three factors had a significant impact on the SFR, i.e. the body mass index (BMI), stone length and stone width. The SFR was significantly lower in obese patients than in normal and overweight patients. Stone, width <8 mm and length <10 mm had more SFR. On multivariate analysis, BMI, stone width and stone length maintained their statistical significance. **Conclusions:** Primary ESWL remains an effective and safe form of treatment for distal ureteric calculus. The length and transverse diameter of the stone, together with the BMI of the patient, were the only significant predictors of the overall success of ESWL.

POD 08 – 02

A randomised control trial comparing efficacy of Ayurvedic formulation with hydration therapy for asymptomatic renal stones

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Introduction and objectives: Prevalence of stone disease is increasing not only in the India, but worldwide. Currently urinary stones affect 10-12% of the population with a peak incidence at 20-40 years of age. Phytotherapy with medicinal plants is widely used in India as an alternative primary healthcare. Since the plants are claimed to be non-toxic, low-cost, available in rural areas and culturally acceptable, their effectiveness in the treatment of urinary stones needs to be studied. **Objective** of this study is to assess efficacy of ayurvedic formulations in the management of renal calculi in comparison to placebo & hydration therapy where the patient was instructed to ensure 3L of urine output. **Methods:** All patients in our hospital who were incidentally detected to have renal stones (93 patients in each group). Patients above 18 years of age, of either sex, and diagnosed ultrasonographically or radiologically were included in the study. Double blind, randomized, prospective clinical trial was done. Patients divided into 2 groups: Those treated with ayurvedic formulations & those treated with hydration therapy. Treatment was given for 1 month & follow up was done at 1 month, 2 month & 3 months & urine output was measured in both groups. Stone was re assessed with USG/X-Ray. **Results** Although patients on ayurvedic medications had higher stone clearance (especially

those with increased urine output), the increase noted was not statistically significant. **Conclusion:** Ayurvedic formulations are no more effective than placebo in the management of renal stones.

POD 08 – 03

Holmium laser cystolithotripsy under local anaesthesia: our experience

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Objective: To evaluate the feasibility and effectiveness of transurethral holmium: yttrium-aluminum-garnet (YAG) laser cystolithotripsy under local anesthesia. **Methods:** Seventeen consecutive patients with bladder calculi underwent transurethral cystolithotripsy using holmium:YAG laser under local anesthesia. The operation was performed with all the patients in the lithotomy position. All patients underwent transurethral holmium laser cystolithotripsy (HLC) with a flexible cystoscope under local anesthesia. A urethral Foley catheter was placed postoperatively. **Results:** Seventeen patients with a mean age of 46.2 years were managed with HLC. All patients were rendered stone-free, regardless of stone size. The mean stone size was 3.6 cm (range 3-5) and the mean operative time was 51 minutes (range 45-65). The whole procedure was well tolerated and no major intraoperative complication occurred. The mean hospitalization was 2.1 days. After a mean follow-up of 12 months, no recurrent stone, urinary retention, or urethral stricture developed. **Conclusions:** Transurethral holmium:YAG laser lithotripsy under local anesthesia appears to be a safe and effective technique for the bladder calculi. Thus, it may be used as an alternative treatment option.

POD 08 – 04

Correlation between inflammatory markers with post-PCNL recovery in patients with renal stone disease: A prospective study

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Introduction and Objective: Life time prevalence of kidney stone disease is 1-15%. Men are affected 2-3 times more than female. PCNL is standard treatment of renal stone >2 cm. Systemic inflammatory markers notably CRP is associated with renal stone disease. **Objective** of our study is to investigate whether the preoperative value of C-Reactive Protein and Neutrophil: Lymphocyte (NLR) has any bearing on the post PCNL recovery. **Method:** A prospective study conducted in the Department of Urology, in our hospital, from September 2014 to August 2015. 71 patients with renal stone more than 2 cm who fulfilled our inclusion criteria were taken up for the study. Preoperative CRP and NLR are measured. CRP >5 mg/l and NLR >2 is referred to be abnormal. All patients were subjected to PCNL. Postoperative temperature, pulse, BP, general and p/a examination, CBC, RFT, CRP and NLR were measured. Postoperatively temperature >100 F in day 1, up gradation of antibiotic, abdominal distension >1 day referred to be abnormal. **Results** were calculated statistically by using Student t test. **Results:** 52% and 57% of patients with normal preoperative CRP and NLR respectively has normal postoperative recovery and 28% and 33% patients with raised preoperative CRP and NLR respectively has delayed postoperative recovery. **Conclusion:** CRP and NLR value can determine the postoperative recovery. Preoperative raised CRP and NLR is significantly correlated with delayed recovery in postoperative period.

POD 08 – 05

A comparative study of supine transgluteal extracorporeal shockwave lithotripsy and ureteroscopy for management of distal ureteral stones

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Introduction: Early attempts to manage Distal ureteric calculi with the patient in prone position was not as successful as in Supine ESWL for

renal and upper ureteric calculi. Use of Transgluteal approach with the patient in supine position, has increased the interest in the management of distal ureteric calculi by ESWL. Aim: To study the outcome of Supine transgluteal ESWL on Distal ureteric stones and to compare its results with semirigid Ureteroscopy in the management of distal ureteric stones. Materials and Methods: This is a prospective study conducted in the dept. of Urology, between Sep 2014 to FEB 2015. 120 patients were selected and randomly allocated into two Groups. Group A comprised 70 patients who underwent Supine Transgluteal ESWL using Dornier Compact delta II and Group B comprised 50 patients who underwent ureteroscopy with pneumatic lithotripsy with standard 8-9.5 semirigid ureteroscope. Patients were followed up for 3 months and all complications were recorded. Failure is defined as any stone fragment at the end of 3 months. Data were tabulated and analysed statistically. p value of < 0.05 was considered significant. Results: overall stone free rate was 93.8%, about 89.4% success in Group A and 100% in Group B. Common complications registered were Haematuria (35.90%), fever (28.20%), steinstrasse (23.08%) etc. Conclusion: The outcome of Supine Transgluteal approach ESWL is not inferior to Ureteroscopy but superior in terms of Post Procedural Complications.

POD 08 – 06

Mini PCNL with Storz MIP XS nephroscope is ideal for pediatric urolithiasis: A pilot study

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Introduction: Management of pediatric urolithiasis has always been a situation requiring special concern due to the limitation of available instrumentation. With advancement in technology, new equipment has evolved which has helped in dealing with pediatric stones. Storz MIP XS (Karl Storz, Germany) is a newly developed 7.5F nephroscope which uses Amplatz sheaths of 8.5F/11F and is ideally suited for these small size patients. We evaluated the efficacy and feasibility of Storz MIP XS system in pediatric age group in this study. Materials and Methods: We used Storz MIP XS nephroscope for PCNL in 8 pediatric patients from March 2015 till June 2015. We had 8 pediatric patients with 5 male and 3 females. The mean age was 9.5 years (range 6–14). Mean stone size was 14.75 mm (range 11–22). The initial puncture was ultrasound-guided followed by tract dilation under fluoroscopic guidance. Holmium Laser was used for fragmentation in all the cases and fragments washed out through the Amplatz sheath. Results: The mean operative time was 28.87 minutes (range 19–45). Two renal units had upper calyceal puncture whereas 3 had middle, 3 lower calyceal punctures. DJ stent was placed in 2 patients whereas 6 patients were totally tubeless, leaving only a ureteric catheter indwelling overnight. No patient required nephrostomy tube. The mean Hemoglobin drop was 0.31 gm% with no blood transfusion. Post-op one patient had mild fever which was managed conservatively. The mean hospital stay was 57.25 hours (range 36–72 hours). Complete stone clearance was confirmed in all cases (100%) on post-op X-ray KUB and ultrasound. Conclusion: The new Storz XS nephroscope is ideally suited for pediatric PCNL cases as small-sized tract is associated with minimal trauma and chances of bleeding. This should be accepted as the standard of care in pediatric nephrolithiasis, where flexible ureteroscopy is not a feasible alternative.

Podium Session 9: UROLITHIASIS – 2

POD 09 – 01

Comparison of percutaneous nephrolithotomy and ureteroscopic lithotripsy in treatment of upper ureteric calculus

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Objective: Objective of this study was to compare the results of Percutaneous nephrolithotomy & Ureteroscopic lithotripsy in upper ureteric calculus. Materials and Methods: Between Dec 2014 and July 2015, 54 patients including 32 males and 22 females (mean age 38.5 ± 13.2 years) with upper ureteral stones were enrolled into two groups - 29 patients in

PCNL (group A) and 25 in URSL (group B). A 24 Fr rigid nephroscope was used for PCNL under GA. URSL was conducted using an 8/9.5 F semirigid ureteroscope under SA. Results: There were no significant differences in age, gender, calculus size and serum creatinine between two groups. Mean calculus size in PCNL group was 13.5 ± 1.3 mm & in URSL group 12.4 ± 0.7 mm. In group A, 27 patients achieved complete stone clearance. Two patients presented with residual calculus underwent ESWL, four patients developed hematuria, 3 patients developed fever postoperatively, 2 patients (6.9%) required blood transfusion. In group B, four patients presented with residual calculus, retropulsion in 3 patients, two developed urinoma and 2 had fever postoperatively. Mean operative time in group A was 43 minutes & 54 minutes in group B. Postoperative hospital stay was 2.2 ± 1.1 days in group A while 1.5 ± 0.8 days in group B. Group A patients had an mean VAS pain score of 46 mm compared with 31 mm in group B. Conclusion: The stone-free rate at 1 month follow-up was 93.1% in the PCNL group and 72.0% in the URSL group ($p < 0.05$). Operative time was higher in URSL group, however it had the advantages of significant less postoperative pain and shorter postoperative hospital stay ($p < 0.01$).

POD 09 – 02

Pre extra corporeal shockwave lithotripsy Double J stenting for upper ureteric calculus: Is there a role with deflazacort?

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Introduction and Objective: For small and medium sized upper ureteric calculus Extracorporeal Shockwave Lithotripsy (ESWL) still remains the preferred treatment though its drawbacks compared to invasive modalities are lesser stone clearance, more time to clearance and colicky episodes. Objective of this study is to evaluate the efficacy of DJ stenting with or without deflazacort for various outcome factors like stone clearance and expulsion time after ESWL of upper ureteral calculi. Methods: A total of 90 patients with solitary upper ureteral calculi who underwent ESWL were divided into three groups. Group A (30 patients) were given standard therapy (Analgesics), Group B (30 patients) were pre-stented and given standard therapy and Group C (30 patients) were pre-stented and given standard therapy plus deflazacort (6 mg twice daily). Patients were evaluated at 2 and 4 weeks post ESWL with X ray KUB and USG. Results: At the end of 4 weeks 9, 16, and 25 patients in group A, B and C cleared their stones respectively. Out of these 3, 6 and 18 patients in group A, B and C respectively cleared their stones in first 2 weeks. Conclusions: Addition of deflazacort post ESWL for pre stented upper ureteric calculi can increase the stone expulsion rate and reduce the duration in which stone is expelled. Further randomized controlled trials are required to establish the fact.

POD 09 – 03

A prospective observational study of stented versus stent-free day-care ureteroscopy for the management of middle and lower ureteric calculi

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Introduction: There are only few studies on the stent free ureteroscopy undertaken as a day-care procedure. In the present observational study we compared the outcome and post-operative complication between stented and stent free ureteroscopy performed as a day-care procedure for the management of middle & lower ureteric calculi. Materials and Methods: A total of 66 patients treated with day-care ureteroscopy for middle and distal ureteral stones were randomized to 2 equal groups according to postoperative placement of a ureteral stent including. Stones were managed with semirigid ureteroscopy with or without distal ureteral dilation and/or intracorporeal lithotripsy. Outcome measures were flank pain, dysuria, total analgesia requirement, immediate and delayed readmission rate, irritative voiding symptoms, stone-free rate, stricture formation and late postoperative complications. Results: Mean stone size was not significantly different between two groups. Mean operative time was significantly longer in the stent group ($p = 0.04$). The mean VAS score for flank pain and dysuria was not significantly different in the immediate postop period ($p = 0.92$, p

= 0.33) but both were significantly higher in stented group on post op day 3 and 7 ($p < 0.001$). Mean requirement of oral analgesic was significantly higher in stented group ($p < 0.001$) during first 2 weeks post-operatively. The mean IPSS score on post op day 7 & 14 for frequency, urgency and nocturia were significantly higher in stented group ($P < 0.0001$). There was no significant difference between the two groups regarding hematuria, fever and urinary tract infection. All patients in either groups were without evidence of obstruction or ureteral stricture and 100% stone-free rate at 2 months of follow-up. Conclusion: Ureteroscopy can be successfully performed in an outpatient setting. By omitting the stent operating time, postoperative pain, and analgesic requirement were reduced without increasing the complication rate.

POD 09 – 04

Predicting outcomes after percutaneous nephrolithotomy: What is best? – BI institutional validation and comparison of 3 scoring systems

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Introduction: There is no uniformly applied scoring system to predict Stone Free Rate (SFR) post PCNL. This study aims to externally validate Guy's Stone Score (GSS), Seoul National University Renal Stone Complexity (S-ReSC), and S.T.O.N.E. scoring system and comparatively assess their reliability and validity in predicting SFR. **Methods:** Prospectively consecutive adult PCNL patients (distributed conveniently between two hospitals) were assessed preoperatively by Non Contrast Computed Tomography (NCCT) scan and assigned all scoring systems by one resident and consultant. Stone clearance was reassessed by NCCT. 'Inter rater' and 'test retest' reliability were assessed. 'Validity' was assessed by comparing Stone free rates (SFR) as well as complications (modified Clavien Dindo Score). 'Comparison' for SFR was done by assessing area under ROC (Receiver operating characteristic) curves. **Results:** 160 consecutive patients were enrolled. Reading results in order of GSS, S.T.O.N.E. and S-ReSC respectively - Inter rater agreement (weighted Kappa) was 0.96, 0.95, and 0.95; test retest reliability (intra class correlation coefficient) was 0.84, 0.93, and 0.93; spearman correlation coefficient between complications and scoring system grade was 0.36, 0.32 and 0.41 (p value < 0.001 for all). ROC curve analyses for SFR showed area under curve of 0.75, 0.74 and 0.81 respectively with significant difference between S-ReSC and GSS (p value < 0.0071). **Conclusions:** All three scores performed similarly in terms of reliability however S-ReSC score performed better in terms of validity and predicting complications than GSS. However there are unique merits of each score and all can be recommended for clinical practice.

POD 09 – 05

Guys stone scoring system: The way ahead for percutaneous nephrolithotomy training

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Introduction and Objective: Guy's Stone Score (GSS) has been proposed to predict outcomes following percutaneous nephrolithotomy (PCNL). This study aims to evaluate its role in PCNL training with hypothesis that graded exposure of trainee to higher complexity stones should lead to better outcomes. **Methods:** Our hospital introduced system of ordered PCNL training in 2015 by exposing trainees to 30 cases of each GSS grade before proceeding to next grade. Data was compared for outcomes in terms of Stone Free Rate (SFR) and complications (modified Clavien Dindo score) between 102 consecutive cases of present batch of trainees and 102 random cases done by people with varying level of clinical experience in the previous year. **Results:** The distribution of cases in terms of complexity was similar between two groups. Overall SFR were not significantly different between groups of previous year and new trainees (70% vs 77%, p value 0.28) with consistently similar SFR observed across each grade of GSS complexity. Though most complications were of mild severity but significantly lower complication rates were seen in favour of newer batch

of trainees (p value < 0.0028) with trend noted for lower complication rates across increasing severity of complications (p value < 0.001). **Conclusion:** Structured training program exposing trainees in objectively graded manner to higher complexity of cases determined by stone complexity scoring system reduces complication rates and should be standard of care in teaching PCNL.

POD 09 – 06

Comparison of the perioperative morbidity following PCNL and Mini PCNL

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Introduction and Objectives: Percutaneous nephrolithotomy has become the preferred treatment for renal calculi more than 2 cm in diameter. Minimally invasive or miniPCNL has been introduced with the aim of decreasing the morbidity associated with larger instruments in standard PCNL. Here we compare the morbidity associated with these two techniques. **Methods:** We did a comparative study of PCNL and Mini PCNL in our institution, done by a single surgeon during the period from June 2014 to July 2015. Of the 60 patients, 30 underwent PCNL and 30 underwent Mini PCNL. P value < 0.05 was taken as statistically significant. We compared the hemoglobin drop, blood transfusion, analgesic requirement, hospital stay, clearance rate and need for ancillary procedures. **Results:** The average stone size was 2.6 cm and 2.46 cm for patients undergoing PCNL and MiniPCNL respectively. The average hemoglobin drop was 1.14 gram and 0.62 gram and the average hospital stay was 6.2 days and 4.2 days and analgesic requirement was 3 gram and 1.8 grams of tramadol respectively for PCNL and miniPCNL group. All these above values were statistically significant with a p value < 0.001 . Blood transfusion rates for PCNL was 13.34% and no patient in mini PCNL group required blood transfusion. 5 patients in PCNL and 4 in miniPCNL group required ancillary procedures. Clearance rate was 90% for PCNL and 86.7% for mini PCNL. **Conclusion:** Most of the morbidity of PCNL is related to large tract. Mini PCNL is thus a less morbid alternative to PCNL with comparable clearance rates.

Podium Session 10: UROLITHIASIS – 3

POD 10 – 01

Evaluation of changes in serum electrolytes and glomerular filtration rate in the early period after percutaneous nephrolithotomy

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Introduction and Objectives: PCNL is the most common surgery performed nowadays for the renal stone. However alteration in renal function and serum electrolytes, if any, post PCNL is not well known. **Materials and Methods:** A total of 110 adult patients with normal renal function, who underwent PCNL between April 2013 and November 2014 were evaluated prospectively. Hemoglobin percentage, PCV, BUN, serum creatinine and serum electrolytes (sodium, potassium, chloride, ionized calcium) were measured on day before surgery and after 72 hours of procedure. Renal function was assessed in the form of creatinine clearance by Cockcroft-Gault formula and estimated GFR by modification of diet in renal disease formula. **Results:** Serum electrolytes and BUN did not show significant alterations. However, serum creatinine increased significantly from mean value of 0.89 ± 0.199 mg/dL to 0.96 ± 0.252 mg/dL ($p = 0.0002$) and both creatinine clearance and estimated GFR experienced significant fall – from a median value of 82.99 mL/min to 75.38 mL/min in case of creatinine clearance ($p = 0.0004$) and from a mean value of 95.18 ± 19.868 mL/min/1.73 m² to 89.30 ± 23.143 mL/min/1.73 m² in case of estimated GFR ($p = 0.00360$). Furthermore, there were significant drop in both Hb% and PCV. Although the fall in estimated GFR was more in patients who underwent two tract dilation compared to one access group, it did not achieve statistical significance. **Conclusion:** Even though there is no significant variation in serum electrolytes, PCNL causes significant reduction in renal function that persists even 72 hours after the procedure.

POD 10 – 02**Predictors of pyonephrosis in patients of renal calculus****Madhusudan Patodia, Apul Goel, Vishwajeet Singh, Sankhwar SN, Singh BP, Sinha RJ, Manoj Kumar**

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Introduction: There is no study to identify risk factors leading to pyonephrosis in cases of renal calculus. **Aims and Objectives:** To identify predictors of pyonephrosis in patients of renal calculus. **Materials and Methods:** All patients of renal stone without pyonephrosis (Group 1) or with pyonephrosis (Group 2) presenting between January 2014 and Feb. 2015 were prospectively evaluated and divided into two groups. Data regarding age, sex, BMI, comorbidities, associated urological anomaly, stone bulk, CRF, hydronephrosis were recorded. **Results:** During study period total 453 patients were enrolled. 372 patients in group 1 (patients of renal calculus without pyonephrosis) and 72 patients in group 2 (patients with pyonephrosis) were enrolled during the study. There was no significant difference in mean age (Group 1 - 38.4 yrs, Group 2 - 36.6 yrs, $p > 0.5$), male to female ratio, mean BMI ($p > 0.5$), associated co-morbid condition ($p > 0.5$), associated urological anomaly ($p > 0.5$) and presentation with CRF ($p > 0.5$). Severe hydronephrosis was present more frequently in cases of pyonephrosis ($p < 0.5$). Mean stone size was significantly higher in pyonephrotic group ($p < 0.5$). Staghorn calculi were present more commonly in pyonephrotic group ($p < 0.5$). **Conclusion:** On the basis of our initial experience, presence of severe hydronephrosis, large stone bulk, multiple calculi and presence of staghorn calculi are associated with pyonephrosis.

POD 10 – 03**Urinary stone analysis of 15,000 stones in India****Mehta Sanjeev**

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Introduction: Urolithiasis is a common urological disorder in India. Technical advancements have made it possible to accurately detect stone composition now. This study reflects different types of stone disease in 15,000 patients from different parts of India and highlights prevalence & distribution of different types of stones in country's population. **Objective:** This study was done to know prevalence of various types of stone components in different age and genders of population. To the knowledge of author, this large number of stones analyzed and documented first time in India. **Methods:** 15,000 Stones collected between June, 2011 to June, 2015 from different cities of India and analyzed by Optical crystallography and Fourier transform infra-red spectroscopy (FTIR). Patients were divided in different age and sex groups. Predominant stone compositions recorded. **Conclusion:** Single component noted in about 2.3% stones while remaining were mixed stones. Calcium oxalate stones were 81.2% with calcium oxalate monohydrate as predominating. Calcium phosphate stones were 3.2% and Magnesium ammonium phosphate were 3.4%. Uric acid stones are predominant in 11.2%. Rare stones like xanthenes and cystine stones accounted 0.7% each. Cities with more non vegetarian eaters show more of uric acid stones. Knowing stone composition is helpful as guide for focal treatment and helps in planning ways for stone prevention.

POD 10 – 04**Endoscopic combined intra renal surgery for renal and ureteric stones: Outcomes of technique with conventional rigid instruments****Mittal Jayesh, Manikandan R, Dorairajan LN, Sreerag KS, Mishra Amit, Kumar Santosh**

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Introduction: Management of combine renal and ureteral stone is usually done by ureteroscopic lithotripsy and conventional prone PCNL. We explore the possibility of management of this condition by using endoscopic combined intra-renal surgery (ECIRS) in Galdakao - modified supine Valdivia (GMSV) position to overcome difficulty in positioning and anaesthesia management and to decrease operative time. **Materials and Methods:** From June 2012 to August 2015, 43 patients underwent supine

ECIRS in GMSV position with help of conventional rigid Nephroscope and Ureteroscope. Retrospective analysis of demographic data, operative times, complications, and stone-free rates was undertaken. **Results:** There were 33 male and 10 female patients. Single, multiple and staghorn renal stones were 22, 15, 6 respectively. The mean stone size was 26.1 mm (range: 10–60). Average operative room occupation time was 132.4 min (range: 60–180). Mean hemoglobin drop was 1.42 gm/dl. In the single, multiple, and staghorn stone groups, the immediate success rate after ECIRS was 91%, 67% and 67% respectively. Complications included two sepsis, one ileus, one bowel injury requiring ileostomy, one PCN site abscess. Mean hospital stay was 8.4 days (range: 2–31). Nine patients (21%) had a secondary procedure (SWL or Redo PCNL). Success rate after secondary procedure was 100%, 93%, and 100% in the single, multiple, and staghorn stone groups respectively. However, limitation of this study is its design, which is descriptive rather than comparative and retrospective nature. **Conclusion:** ECIRS is a safe and reproducible method in GMSV position using conventional rigid Nephroscope and Ureteroscope. It offers the advantage of simultaneous retrograde and antegrade endoscopic combined intrarenal surgery, more favorable for the patient, the operative theatre team, and the anesthetist when compared to the classic prone position. Stone clearance and morbidity seem to be similar to traditional prone PCNL.

POD 10 – 05**Stone attenuation value and cross-sectional area on computed tomography predict the success of shock wave lithotripsy****Prabu PK, Ilamparuthi C, Thiagarajan K**

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Purpose: To identify the parameters on noncontrast computed tomography (NCCT) that best predict the success of shock wave lithotripsy (SWL). **Materials and Methods:** We reviewed the records of 85 patients who underwent SWL for urinary calculi measuring 5 to 20 mm. Using NCCT images, we estimated the largest stone cross-sectional area and contoured the inner edge of the stone. Clinical outcome was classified as successful (stone-free or <4 mm in diameter) or failed (stone fragments, ≥ 4 mm). **Results:** The overall success rate was 73.3%. Average stone attenuation value, stone length, and stone cross-sectional area in the success and failure groups were 627.4 ± 166.5 HU (Hounsfield unit) vs. 788.1 ± 233.9 HU, 11.7 ± 3.8 mm vs. 14.2 ± 3.6 mm and 0.31 ± 0.17 cm² vs. 0.57 ± 0.41 cm² respectively. In the multivariate analysis, stone attenuation value was the only independent predictor of SWL success, although stone cross-sectional area had a tendency to be associated with SWL success. Patients were then classified into four groups by using cutoff values of 780 HU for stone attenuation value and 0.4 cm² for cross-sectional area. By use of these cutoff values, the group with a low stone attenuation value and a low cross-sectional area was more than 10 times as likely to have a successful result on SWL as were all other groups. **Conclusions:** Stone attenuation value and stone cross-sectional area are good predictors of extracorporeal SWL outcome.

POD 10 – 06**Percutaneous kidney mobilization for upper calyceal puncture: An initial study of 10 cases****Pramod Makannavar, Imdad Ali N, Shivashankarappa M, Ravishankar THS, Jayaprakash G, Arun Antony, Lokesh Gowda TG**

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Introduction: Percutaneous nephrolithotomy (PCNL) is the treatment of choice for large or complex renal calculi. To achieve the optimal result, it is important to gain intra-renal access through an appropriate calyx. In cases with upper pole stones, impacted upper Ureteric calculi, staghorn calculi, upper pole access or some time supracostal approach may be needed for best results. Supracostal percutaneous access is associated with intrathoracic complications in the range of 3.1% to 12.5%, especially if the access is above 11th rib. To reduce these complications we use the technique of percutaneous inferior distraction of the kidney for upper pole access in order to avoid supracostal access. **Purpose:** This is a prospective study to evaluate the effectiveness and complications associated with the technique of percutaneous inferior distraction of the kidney for upper pole access in

PCNL for upper pole stones. Materials and Methods: This is a initial study of 10 cases. Patients having upper pole calculi which usually need supracostal puncture are selected for the study. The effectiveness and complication associated the technique are assessed. Results: We have found out that this technique to be effective and without any added morbidities. We were able to avoid supracostal access and its complications for stones which were situated in upper calyx. We have achieved good stone clearance. Conclusion: Percutaneous Inferior distraction of kidney is an effective technique with no added morbidity for upper calyceal stones.

Podium Session: 11 BASIC SCIENCES, INFECTIONS AND MISCELLANEOUS – 1

POD 11 – 01

Clinical and sonographic features predicting testicular torsion in children and adults

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Objective: To test the clinical and sonographic predictors of testicular torsion (TT) with the aim of reducing negative exploration rates. Patients and Methods: We have done a prospective study of all boys and males treated for 'acute scrotum' at our institute between January 2012 and April 2015 and clinical findings were documented. If available, ultrasonography (US) was added to the diagnostic evaluation. A prediction of the diagnosis was based on clinical and sonographic features, and was followed by surgical exploration in all patients. Results: A total of 37 patients were included in the 40-month period of the study. No single finding excluded TT. The clinical features (pain <24h, nausea/vomiting, abnormal cremasteric reflex, high position of the testis) appeared predictive (100% sensitivity) and the our MMC clinical scoring system was proven to be reliable in reducing the negative exploration rate by >65%. Ultrasound predictors alone were not able to identify all boys with TT. Conclusions: It is safe to refrain from routine surgical exploration in every patient with acute scrotum if the clinical score is applied, which results in a marked reduction of negative explorations. A reliable diagnosis could not be obtained based on US alone. We propose to refrain from this if the clinical score is positive. Patients with a negative clinical score are suitable candidates for US to establish and secure diagnosis.

POD 11 – 02

Our experience with primary renal hydatid cyst: A case series

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Objectives: Primary Renal involvement in echinococcosis is rare, constituting 2-4% of all cases. We present a retrospective study of 9 cases of primary renal Hydatid cyst (2012-2015). Materials and Methods: We have retrospectively evaluated the demographics, incidence, clinical presentation and investigations of Primary renal Hydatid cyst (RHC) with treatment modalities such as medical management, Surgical derroofing, Pericystectomy, Laparoscopic cyst aspiration and nephrectomy. Results: This series consists of 6 males and 3 females with a mean age of 34 years (18-45 yrs.). Incidence of Hydatid cyst was Left 66% and right 33%. The clinical presentation was predominated by pain (7 cases), mass (4 cases), Hydatiduria (3 cases) and recurrent UTIs with fever (2 cases). IVU performed showed calcification in 2 patients. All cases underwent CT abdomen with USG correlation. The incidence of location of the RHC were lower pole (33%), Mid Pole (22%), Mid + upper pole (33%), and upper pole (11%). Management Consisted of open cyst derroofing (4 cases), pericystectomy (1 case), Laparoscopic cyst aspiration with excision of the exocyst (2 cases) and partial nephrectomy (2 cases). Immediate post-operative complication was marked by Urinary fistula in 1 case which was managed by placement of a retrograde DJ stent. All patients were given albendazole over a period of 4 to 6 months and followed upto 2 years, no recurrences were noted. Conclusions: The objective of this study is to observe the occurrence and management of Primary RHC and that surgical management along with medical therapy has lower recurrence rates and complications.

POD 11 – 03

Randomised controlled trial to compare the efficacy of tamsulosin versus tolterodine in relieving double J stent related symptoms

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Aim: To evaluate the effectiveness of Tamsulosin versus Tolterodine in reducing double J stent related symptoms. Material and Methods: A prospective study of 100 patients with double-J ureteral stenting was conducted & patients were randomly divided, postoperatively, into 2 groups, alternately receiving tamsulosin 0.4 mg daily (group 1) or tolterodine 4 mg daily (group 2). At 1 and 2 weeks following double J stent insertion all patients completed Ureteral Stent Symptom Questionnaire (USSQ score) & Visual analogue scale (VAS) for pain. Results: The demographics and preoperative questionnaire scores of both groups were comparable. There was statistically significant difference in USSQ score between the two groups in favour of group 1 (tamsulosin 0.4 mg) at 1 week post stenting (P = 0.03), however no significant difference was observed between the two groups at 2 weeks. No statistically significant difference in visual analogue scale for pain was observed between 2 groups. Discussion: Stent related symptoms such as storage, voiding, hematuria & pain are believed to affect over 80% of patients. Pathophysiology could be related to lower ureteral smooth muscle spasms & local irritation to neuronal-rich trigonal mucosa, which contains α -1D receptors. Alpha blockers relieve flank pain by blocking alpha-adrenergic receptors and relaxing smooth muscles of ureter, trigone and prostatic urethra thus reducing bladder outlet resistance and voiding pressure. Anticholinergics decrease bladder overactivity & contraction by mediating muscarinic receptors. We have compared alpha blocker and anticholinergic drugs in reducing stent related symptoms. Conclusion: Tamsulosin is more effective than tolterodine in relieving double J stent related symptoms.

POD 11 – 04

Unexplained voiding dysfunctions in adult women: Clinical and urodynamic variations

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Introduction: Voiding dysfunctions (VD) are under reported in women than storage dysfunctions. In this study clinical presentation and urodynamic patterns of various unexplained voiding dysfunctions are retrospectively analysed. Materials and Methods: The data was retrieved from February 2013 to August 2014. The analysis included 20 women with dysfunctional voiding (DV), 15 with primary bladder neck obstruction (PBNO) and 9 with urethral stenosis (US). The diagnosis was based on International Continence Society terminology. Demographic parameters of all the three groups were comparable. Results: The main presenting symptom was straining in all. Storage symptoms were more common with DV and US than PBNO (P 0.083 and P 0.028). Dysuria was more prevalent with PBNO (66.67%, 20%) and US (88.89%, 22.22%) than DV (P 0.001 and P 0.000). Women with PBNO had mean Qmax significantly lower statistically than DV (5.1 ± 3.6 ml/s and 7.7 ± 3.2 ml/s respectively; P 0.031), while a significantly greater mean Pdet at Qmax was found with PBNO than DV (87.1 ± 45.1 cm H₂O vs 59.5 ± 25.2 cm H₂O; P 0.028). Poor compliance was only associated with DV (23.07%). The EMG showed increased activity during voiding in 69.23% of DV but also 25% of PBNO (P 0.009). Conclusion: VD is still under reported in India. Urodynamic studies along with fluoroscopic appearance of the bladder outlet yielded a high diagnostic rate. The accurate diagnosis of these entities is critical because the endpoints of the treatment algorithms are vastly divergent.

POD 11 – 05

Case series of surgical site infection by atypical mycobacteria: Atypical complication of percutaneous nephrolithotripsy

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Introduction: Port site tuberculosis post laparoscopy is a known infection and is widely reported in literature. However there is only one case series demonstrating nephrostomy site tuberculosis post PCNL consisting of 6 cases in the literature. We report a case series of 10 patients who presented to us with non-healing wound at nephrostomy site. We present our experience and share the treatment modalities which worked for these patients. **Materials and Methods:** (1) All patients who had reported to us with port site infection not responding to a course of routine antibiotics (amoxicillin-clavunate) were investigated with biopsy and culture. (2) Patients proven to harbor tuberculous infection were prospectively followed for resolution of lesions till complete cure. (3) Multivariate Demographical analysis and search for risk factors was undertaken. **Results:** (1) No relation was established between demographic variables and risk of infection. (2) All cases were caused by atypical mycobacteria and not tuberculous bacteria as was cited in previous case series. (3) Response to routine anti tuberculous drugs was poor when not given along with Clarithromycin or Azithromycin. (4) All cases were caused when 2% glutaraldehyde was used for sterilizing the instruments. (5) We have not reported any cases after changing the mode of sterilization to ETO. **Conclusion:** Though neglected sterilization is an important aspect which needs to be addressed with due respect. If any case comes with non healing wound at nephrostomy site, the possibility of atypical mycobacteria should be considered. Routine AKT is of not much benefit unless combined with macrolides (based on culture-sensitivity report).

POD 11 – 06

Grade V renal injury: Short and long term outcome

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Introduction: Over the last few decades, non-operative management (NOM) has become increasingly popular, especially for low-grade (I-III) blunt renal injuries. The published evidence is unclear about the role of NOM for higher grades (IV and V). We took up this study to report our short and long-term outcomes following initial non-operative management in patients sustaining a grade V renal injury secondary to blunt trauma. **Materials and Methods:** The charts of all patients who presented to our institution with blunt renal trauma between Jan 2000 and Dec 2014 and had grade V renal injury were identified and analyzed. **Results:** 114 patients were identified, with grade V renal injury following blunt trauma (BRI). 9/114 patients (7.89%) died following resuscitation in the casualty and emergency services, 4 (3.50%) of whom had deaths that were related to the kidney injury. 36 (34.28%) underwent early surgical exploration (13–42 hours) for various indications and nephrectomy was performed in 21 (58.33%). Eight patients who were on non-operative management needed delayed surgical exploration of which two patients (25%) presenting with massive secondary bleeding needed nephrectomy for control of the bleeding. **Conclusions:** 41.9% of patients with grade V renal injury needed surgical exploration of which 34.28% underwent early, whereas 7.61% underwent delayed exploration. 58.33% of patients undergoing early exploration and 25% of patients undergoing delayed exploration ended up with nephrectomy. Non operative management would be safe in the majority of patients with grade V renal injuries secondary to blunt trauma.

Podium Session: 12 BASIC SCIENCES, INFECTIONS AND MISCELLANEOUS – 2

POD 12 – 01

Emphysematous pyelonephritis - When to intervene? A study of 50 cases at Goa Medical College

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Introduction and Objective: Emphysematous pyelonephritis (EPN) is an acute necrotising parenchymal and perirenal infection caused by gas forming organism commonly occurring in diabetic patients. Our aim was to study: (1) Impact of prognostic factors on outcome. (2) Impact of

minimally invasive interventions in saving renal units. (3) Role of medical line of management without any surgical intervention in non-obstructed EPN. **Materials and Methods:** 50 consecutive cases of emphysematous pyelonephritis between April 2008 and May 2015 were prospectively studied. Their mode of presentation, side of involvement, co-morbid conditions, severity of sepsis and prognostic factor score (1-5) were analysed. Prognostic factors studied were altered sensorium, shock, acidosis, thrombocytopenia and need for dialysis. **Results:** Commonest age group was 51-65 years. All patients were diabetic (type II). 10 had bilateral renal involvement. 34 patients had obstructed system. 4 patients were treated conservatively without any surgical intervention. 46 patients underwent minimally invasive surgical intervention in the form of DJ stenting and/or PCN, of which 14 patients underwent delayed nephrectomy. 10 out of 14 who underwent nephrectomy and 4 out of 32 who underwent minimally invasive surgical intervention died. **Conclusion:** Minimally invasive option in EPN is more likely to be successful in salvage of renal unit in patients with ≤ 3 Prognostic factors. Altered sensorium was found to have maximum impact on mortality. With early diagnosis, availability of more potent antibiotics and advances in critical care support systems, patients can be managed with conservative approaches in cases of non-obstructed EPN.

POD 12 – 02

Renal depth measurement

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Introduction: While the importance of renal depth in percutaneous renal procedures is obvious, there is surprisingly sparse literature on this. Our paper measures skin to renal surface depth in a hospital based population. **Materials and Methods:** Between July 2014 and December 2014, we prospectively analysed all adults patients who had Ultrasound. The depth was measured using curvilinear 5 MHz probe in right and left lateral decubitus position using GE logic P5 machine by single sonologist. The exclusion criteria were previous renal surgeries, hydronephrosis, contracted kidney, S. creatinine >1.4 mg% in males, >1.1 mg % in females, BMI not available, ectopic kidney. Based on BMI, patients were classified as underweight (<18.49), normal (18.5 to 24.99), overweight (25 to 29.99) and obese (>30). The depth in relation to sex and age group was also analysed. **Results:** 491 patients met the selection criteria. The overall mean depth of kidney was 4 cm on right and 3.92 cm on the left. The mean depth of right and left kidney was 2.4 cm and 2.27 cm in underweight group and 4.6 cm and 4.58 cm respectively obese in obese patients. The renal depth increased with age and in males. **Conclusion:** From this study, it is clear the depth of kidney increases with increasing BMI. On extrapolating this information, the depth of calyx will be 1.5 to 2 cm more than the renal depth which should help plan percutaneous endourological procedures.

POD 12 – 03

Recurrent pyelonephritis in separated and unseparated papillary necrosis: An observational study

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Introduction and Objectives: Renal papillary necrosis can complicate the disease process by ureteric obstruction and renal failure. If papillae found unseparated they cannot be retrieved during the RIRS. The standard treatment is to relieve the obstruction and retrieve the necrosed papillae by RIRS once the sepsis settles. The objective was to find out the occurrence of recurrent pyelonephritis in patients who had separated papillae which were retrieved and who had unseparated papillae. **Materials and Methods:** A retrospective study was performed between January 2011 and December 2014. 100 patients with mean age 59.9 years underwent RIRS for acute pyelonephritis. The Subjects were divided in to two groups Group A (n = 78) had separated papillae which were completely retrieved and group B (n = 32) had unseparated papilla which could not be retrieved during RIRS. These patients were followed up. Data on age, sex, diabetes, hypertension, recurrent pyelonephritis, glycemic control, renal function, urine culture, were recorded. The data obtained was tabulated and statistically analysed. **Results:** In group A, recurrence of pyelonephritis was observed in 5 (6%) patients compared to 6 (18%) patients in group B. however there was no

statistical significance on chi-square test (chi square = 2.88, df = 1, p = 0.08). Conclusion: In spite of unseparated papillae acts as a source of infection, there exists no statistical difference in the occurrence of pyelonephritis between groups. There is no data on the significance of unseparated papilla in the literature so studies with larger sample size needed.

POD 12 – 04

Renal papillary necrosis: Clinical profile of patients and role of early DJ stenting with ureteroscopic extraction of papilla

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Introduction: Renal papillary necrosis (RPN) is commonly associated with diabetes mellitus. The sequestered papilla causes ureteric obstruction and may complicate further. Prompt diagnosis, imaging, and extraction of the obstructing papilla are essential for successful outcome. **Aim:** To study the clinical profile of diabetic patients presenting with renal papillary necrosis. **To evaluate the usefulness of early DJ stenting with ureteroscopic retrieval of papilla in this patient population.** **Materials and Methods:** We report 24 cases of diabetes mellitus who presented with signs and symptoms of UTI. All were found to have hydronephrosis with pyelonephritis (no underlying stone) on CT abdomen. These patients received IV antibiotics as per department protocol and underwent early DJ stenting with flexible ureteroscopy 8-12 weeks later. Patients were followed up for improvement in renal functions and episodes of recurrent UTI. **Results:** 16 out of 24 patients presented in sepsis. Other clinical manifestations included flank pain, fever, lower tract symptoms and renal failure. All patients improved after early DJ stenting. On flexible ureteroscopy sloughed papilla were found in 20 out of 24 patients, which were extracted. On follow up, there was improvement in renal function and decrease in number and severity of UTI. **Conclusion:** Diabetic patients with renal papillary necrosis often present with sepsis and renal failure. Early DJ stenting and ureteroscopic extraction of obstructing papilla results in dramatic recovery of these patients.

POD 12 – 05

Correlation of differential renal function estimated by CECT and 99mTc-DTPA nuclear scan

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Introduction and Objective: Nuclear renal scan is currently the gold standard imaging study to determine differential renal function. In our study we use CECT as single modality for both the anatomical and functional evaluation of kidney. The renal parenchymal volume is measured and percent total renal volume is calculated. The objective of this study is to correlate between differential renal function estimation using CECT-based renal parenchymal volume measurement with differential renal function estimation using 99mTc - DTPA renal scan. **Materials and Methods:** Thirty patients with unilateral obstructive uropathy and live renal donors were enrolled in this study. They were subjected to 99mTc - DTPA renal scan and CECT scan. The renal volume and percent renal volume was calculated. Percent renal volume was correlated with percent renal function, as determined by nuclear renal scan using Pearson coefficient. **Results and Observation:** A strong correlation is observed between percent renal volume and percent renal function in our study. **Conclusion:** There is a strong correlation between percent renal volume determined by CECT scan and percent renal function determined by 99mTc - DTPA renal scan. CT-based percent renal volume can be used as a single radiological tests for both functional and anatomical assessment of renal units.

POD 12 – 06

Paravesical granulomas mimicking as bladder tumour- Single center experience

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Objective: To comment on other causes of bladder mass which looks like bladder tumour but are due to causes other than transitional cell carcinoma. **Materials and Methods:** From Jan 2004 to December 2014, total of 5 patients presented with clinical and radiological appearance of bladder tumour. Routine TURBT was done and chips sent for histopathological examination. **Results:** 3 patient had histopathological evidence of paravesical granuloma and 2 had HPE s/o inflammatory myofibroblastic tumour. All patients underwent routine check cystoscopy and kept on long term antibiotics. **Conclusion:** Bladder masses can be due to reasons other than malignancy. Clinical suspicion and biopsy is a must in cases with doubt. TUR of these masses with long term antibiotic is recommended in such cases

Podium Session 13: BASIC SCIENCES, INFECTIONS AND MISCELLANEOUS – 3

POD 13 – 01

Nosocomial urinary tract infections in endourology: An audit

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Background: Endourological procedures form a major part of urological interventions. However, these procedures are predisposed for nosocomial urinary infections. Infections with multi-drug resistant strains are not an uncommon occurrence. **Aims and objectives:** To assess the incidence of nosocomial urinary infections following endourological procedures and their microbiological profile. **Materials and Methods:** This prospective study was done between Feb 2015–Aug 2015. All patients with documented negative pre-op urine cultures undergoing endourological procedures were included. Patients on percutaneous nephrostomies, ureteral stents and urethral catheters were excluded. Post-op mid-stream urine cultures were collected on the second day following the removal of in-dwelling catheters. **Results:** 352 patients underwent endourological procedures between Feb 2015 and Aug 2015 – (Males-278 and females-74). Sixteen patients had positive post-op urine cultures – seven asymptomatic UTI, five febrile UTI and four urosepsis requiring hospitalization. Eight had undergone PCNL, three URS and four TURP. The most common organisms isolated from upper tracts were enterococcus (5/131) and E. coli (4/131) and from lower tracts E. coli (4/221). Multi-drug resistant organisms were seen on 5 occasions. **Conclusions:** The incidence of post-op UTIs following endourological procedures with negative cultures is 4.54%. The most common organisms isolated were enterococcus (45%) and E. coli (40%) from the upper tract and E. coli (60%) from the lower tracts. PCNL was the most common procedure where positive post operative urine culture was observed.

POD 13 – 02

Guidelines for optimising outcomes in interdepartmental urological consultations at tertiary care teaching hospital

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Aim: To propose guidelines for optimizing outcomes of interdepartmental urological consultations at a tertiary hospital. **Materials and Methods:** This is a follow up of 'The Study of interdepartmental urological consultations' presented last year wherein urological consultations from other departments were analyzed. Patients categorized based on referring departments, primary urological cases (missed initially) admitted by other departments, and other subclinical and uncommon urological problems, not routinely diagnosed. **Results:** Most common references – Medicine (40.57%), Surgery (23.60%), Orthopaedic (16.02%) and OBG (9.48%). 87 primary urological cases misdiagnosed initially and admitted in other departments. In Medicine, 62/180 (34.44%) patients of fever under investigation had urological pathology and 34/138 (24.6%) patients of uncontrolled DM with sepsis had urological cause. Most OBG references were for obstructive uropathy secondary to malignancy. In this study, we have proposed guidelines for students of Urology & PGs in Medicine, Surgery and OBG besides guidelines for practicing urologists and institutions. **Discussion:** In a tertiary hospital, it is important to formulate

guidelines for approaching urological consultations to optimize patient care. It is likely that morbidity and mortality due to urological problems, in patients treated by other specialities, will decrease. Also consultations will be sought more judiciously. Conclusion: Specific guidelines are necessary for post graduates of various departments, for a better and sound approach while assessing and managing patients. For urologists, an unbiased, broad minded, holistic approach towards referred patients, contrary to the usual "tubular vision practice" of super speciality Departments, is extremely necessary to minimise errors in patient management.

POD 13 – 03

Use of DNA technique to study the association between bacterial species and chronic prostatitis

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Introduction: Prostatitis is common in men younger than 50 years, in about 18.3% cases pathogens can be demonstrated by using current microbiological techniques. Bacteriologic advances, which include the use of specialized culture media and stains, electron microscopy, and PCR for amplifying microbial sequences in tissues and body fluids, have revealed an increasing number of previously unidentifiable organisms in a variety of pathologic conditions. **Materials and Methods:** The patients were clinically diagnosed as chronic prostatitis on the basis of modified NIH symptom score. The specimens of pre prostatic massage (pre EPS) urine (VB1), Expressed prostatic secretion (EPS) and post prostatic massage (post EPS) urine (VB2) were collected. After overnight aerobic incubation at 37°C, the plates were examined for bacterial colonies. The bacterial presence was detected by using nested protocol targeting 16S rDNA gene. **Results:** Majority of the patients' EPS samples (17/30, 56.7%) showed bacterial culture isolates, while most of the pre EPS specimens (25/30, 83.3%), did not show any bacterial growth reflecting the lack of contamination in the specimens. Gram +ve micrococcus was the commonest bacterial culture isolated from patients samples (9/30, 30%), followed by *E. coli* (6/30, 20%) and *Enterococcus faecalis* (3/30, 10%). **Conclusion:** Isolation of *E. coli* and *Enterococcus faecalis* from many of the patients and 16S rDNA amplification and sequencing showing some similarity with *E. coli* suggest that at least we should look for these two pathogens by using nested specific primers for them.

POD 13 – 04

Fracture of the penis: A clinical diagnosis: A case series

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Introduction: Fracture of the penis is a rarity. The exact role of diagnostic investigations is not yet fully defined. Proper clinical examination is all that is required for the diagnosis and management. **Case Series:** Six patients with from 27 to 64 years of age presented to us between 2008 and 2014 with suspected fracture of the penis. The mode of injury was sexual intercourse in 5 patients and masturbation in one patient. Clinical evaluation included patient history and examination for all patients, ultrasonography in two patients, retrograde urethrography in one patients. In all the history was similar which included a cracking sound during erection, immediate loss of the erection and the development of dark bruising of the penis due to blood escaping the cylinder. All six patients underwent immediate surgical exploration. **Results:** Patient history and clinical examination were highly sensitive and accurate in predicting a cavernosal tear, and retrograde urethrography was highly sensitive and accurate in detecting urethral injury. Ultrasonography was highly specific but not sensitive for detecting a cavernosal tear. Radiological investigations did not influence patient management in any of the cases. On surgical exploration, all six patients had cavernosal albugenia tears and one also had urethral injuries; all injuries were repaired successfully. At follow up of one to seven years, no patient had erectile dysfunction or penile deformity. **Conclusion:** Recording proper patient history and performing a clinical examination is all that is necessary for managing patients with suspected penile fracture. Retrograde urethrography may be avoided before surgical exploration, even in cases with suspected urethral injury. Early surgical repair is associated with a good outcome with minimal complications.

POD 13 – 05

Rectal culture before transrectal ultrasound-guided prostate biopsy reduce post-prostatic biopsy infectious rate

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Objective: To test our hypothesis that a targeted rectal screening protocol before transrectal ultrasound (TRUS)-guided biopsy would potentiate streamlined prophylaxis, thereby reducing postbiopsy infectious rates while minimizing unnecessary broad-spectrum antibiotic use. To this end, we instituted preprocedure rectal cultures in an effort to identify fluoroquinolone (FQ) - resistant flora using selective media to optimally direct targeted prophylactic antibiotic administration. The inexorably increasing prevalence of multidrug-resistant microorganisms, notably extended spectrum beta lactamase (ESBL)-producing and FQ-resistant Enterobacteriaceae has increased the post-TRUS prostatic biopsy infection rates, including life-threatening sepsis. **Methods:** A total of 100 rectal swabs were obtained and plated directly onto MacConkey agar plates containing 10-µg/mL ciprofloxacin. Following the screening procedure, antimicrobial susceptibility results were used to develop a customized antibiotic prophylaxis regimen to be administered before biopsy. Following the biopsy procedure, the patients were seen in follow-up within 7 days, and information was gathered on potential adverse effects, clinical appointments for infections, and potential antibiotics received. **Results:** Thirty-two-patients (32%) had FQ-resistant isolates (most *Escherichia coli*), and 5 (5%) were ESBL-producing isolates. There were no infectious complications identified in this period, (compared with 23 septic complications among 100 biopsies in the 6 months preceding the study). **Conclusion:** Rectal cultures obtained before TRUS biopsy, using selective media to identify FQ-resistant Enterobacteriaceae, facilitate targeted antibiotic prophylaxis, and appear to be highly efficacious in reducing infectious complications.

POD 13 – 06

Predictive indications of surgery and mortality in renal trauma: A retrospective study

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Background: This study was aimed to assess the indicators of operation and mortality in case of renal trauma at a tertiary centre. **Methods:** From September 2012 to December 2013 patients who presented with renal injury were enrolled and retrospectively reviewed. Patients were divided into four groups (surgical vs non-surgical and mortality vs survival group) and data were compared. **Results:** 80 patients were enrolled in study. 71 of them (88.75%) were male. 14 patients (17.5%) had high renal injury score (Renal Injury Score [RIS] ≥ 4) and 15 patients (18.7%) were severely injured (InjurySeverityScore [ISS] ≥ 16). 4 patients (5%) died due to hypovolemic shock and multiple organ injury. 8 patients (10%) underwent surgical intervention. After performing multivariate analysis, patients who underwent surgical intervention had higher ISS (≥ 16) and RIS (≥ 4) compared to patients who didn't have surgical intervention. ISS ≥ 16 and poor Glasgow coma scale (GCS) were significantly associated with mortality. **Conclusion:** to conclude ISS ≥ 16 and RIS ≥ 4 are strongly associated with surgical intervention. poor GCS and ISS ≥ 16 are significantly associated with mortality. **Key-words:** GCS, ISS, renal trauma, RIS

Podium Session 14: ENDOUROLOGY AND LAPAROSCOPY – 4

POD 14 – 01

Success rates of percutaneous nephrolithotomy by Guy's stone score and evaluation of complications using modified Clavien grading system: A single center experience

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Introduction: We report an audit of our stone clearance rates and perioperative complications of Percutaneous nephrolithotomy (PCNL). **Materials and Methods:** Retrospective analysis of data including stone complexity and complications of all patients (n = 89) operated between September 2013 and May 2015. **Results:** Out of 93 renal units, there were 37, 30, 18 and 8 patients in Guy's stone scores (GSS) I, II, III and IV groups. GSS I (n = 37) included 14 pelvic, 7 middle and 16 inferior pole calculi, GSS II (n = 30) 20 multiple, 7 upper and 3 pelvic calculus with PUJO, GSS III (n = 18) 15 partial staghorn and 3 multiple calculi with PUJO. GSS IV (n = 8) had complete staghorn calculus. Stone free rate was 92.47% as 9 (9.67%) had clinically insignificant residual fragments, 2 underwent Retrograde intrarenal surgery (RIRS) and 5 ureteroscopy for residual fragments. 32 (34.40%) had grade 1, 39 (41.93%) grade 2 and 7 grade 3 complication according to modified Clavien system. According to stone complexity, 27 (72.97%) in GSS I, 28 (93.3%) in GSS 2, 16 (88.8%) in GSS 3 and 7 (87.5%) in GSS 4 had complications. **Discussion:** Complications in Clavien grade 1 and 2 are minor and grade 3, 4 and 5 are major. In our study, most complications are minor seen in 92.47% and only 7.52% had major complications. As the stone complexity increases complication rate also increases. At first glance, one might be surprised by the fairly high incidence of complications reported but majority of complications are minor in severity

POD 14 – 02**Percutaneous nephrolithotomy in polycystic kidney disease: Is it safe and effective?****Ranil Johann Boaz, Mukha RP, Singh JC, Kumar S, Kekre NS, Devasia A**

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Introduction and Objective: ADPKD is the most commonly diagnosed inherited renal cystic disease. Nephrolithiasis can hasten renal failure and occurs in upto 30% of cases. While SWL remains an option, clearance is believed to be hampered by mechanical obstruction due to cysts. Percutaneous nephrolithotomy (PCNL) was once considered difficult due to narrow infundibuli and distorted calyces. In small series, PCNL has safety and efficacy comparable to normal kidneys. Our objective was to review our experience with PCNL in ADPKD. **Methods:** We retrospectively analysed data of 19 cases of ADPKD treated between January 2003 and July 2015, requiring PCNL for 23 renal units in all. Clinicopathologic data was retrieved and reviewed. **Results:** Mean stone burden was 5.01 +/- 2.50 cm. Stone clearance was complete in 19/22 units (86%). Four patients received post operative SWL for residual calculi, two had stones, inaccessible intraoperatively. Sixty-three percent of patients had chronic kidney disease at diagnosis. Mean preoperative serum creatinine level was 2.03 +/- 0.95 (range 1.1–4.4) and mean post operative serum creatinine level was 1.99 +/- 0.81 (range 1.1–3.5). PCNL had no impact on postoperative renal function (p = 0.35). Ureteric stents were placed in 4 patients, one with concomitant ureteroscopy. One patient requiring intraoperative transfusion, had pre-existent anemia. Four had post-operative fever, one developed sepsis. None required re-look operation or angioembolisation. **Conclusion:** Despite the dual challenges of altered pelvicalyceal anatomy and surgery in CKD, PCNL is both safe and effective in the management of renal stone disease in ADPKD

POD 14 – 03**Use of HEM-O-LOK clips for closure of peritoneal tears during retroperitoneal laparoscopic donor nephrectomy; point of technique****Rizvi SJ, Goyal NK, Valsangkar R, Pal BC, Bhandari NS, Modi PR**

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Objectives: Maintenance of pneumoretroperitoneum is critical to the safe and expeditious performance of retroperitoneal surgery. We describe a technique of using Hem-o-lok clips for closure of peritoneal tears during retroperitoneal laparoscopic donor nephrectomy (RLDN). **Methods:** Data from 100 consecutive RLDNs was collected retrospectively. Body Mass Index, operative times, warm ischaemia time, blood loss and hospital

stays were compared between patients with and without peritoneal tears. Peritoneal tears were closed by placing a row of 5 mm Hem-o-lok® clips at 3 mm intervals to achieve airtight closure. **Results:** all RLDNs were successfully completed without any complications. 8 patients had a peritoneal tear during surgery. In 7 patients peritoneal closure was successfully achieved. In 1 patient closure could not be achieved and this resulted in difficulty in dissection and prolonged operative time. This patient had a 6 cm tear at the upper pole of the kidney. Both groups were similar in Body Mass Index (26.2 vs 25.4), estimated blood loss (27 ml vs 35 ml), warm ischaemia time (132 sec vs 145 sec). Operative time was longer in the group with tears (80 mins vs 98 mins). The patient in whom repair could not be done had an operative time of 156 mins and estimated blood loss of 100 ml, and a warm ischaemia time of 261 seconds. **Conclusions:** The use of 5 mm Hem-o-lok® clips permits airtight closure of peritoneal tears, and allows surgery to be performed with adequate pneumoretroperitoneum and no increase in blood loss or warm ischaemia time.

POD 14-04**Forgotten, encrusted ureteral stents: Removal multimodal endourologic approach****Saha PK, Hossain AKMS, Rasul MA, Alam SM, Ghosh KC**

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Purpose: Ureteral stents placement is a common procedure in daily urology practice. Forgotten ureteral stents represent a difficult problem for the urologists. The major complications are infection, impaired renal function, migration, encrustation, stone formation, multiple fractured stent and a consensus on the best therapeutic approach is lacking. Here, we present our experiences of managing this challenging problem through the multimodal endourologic approach for treating forgotten encrusted ureteral stents. **Patients and Methods:** From January 2010 to December 2014, 29 patients (17 male and 12 female) aged 19 to 57 years (mean 37.48 years) with 35 encrusted ureteral stents (23 unilateral and 06 bilateral), indwelling for 05 to 78 months (mean 18 months) were treated in the department of urology. Stent encrustation and the associated stone burden were evaluated by urine culture sensitivity, renal function, ultrasonography and plain radiography. Treatment decisions were based on the clinical presentations and imaging findings. Patients were followed up for 12 months. **Results:** The mean number of procedures per patient was 2.65 (range 1–5) Percutaneous nephrolithotomy was performed in 02 cases, preoperative percutaneous nephrostomy 10 patients, extracorporeal shockwave lithotripsy was performed 21 cases, retrograde ureterorenoscopy with or without intracorporeal lithotripsy in 29 cases, cystolitholapaxy 16 patients, pyelolithomy 01 patient and suprapubic cystolithotomy was performed 02 patients due to large stone burden. Using above mentioned multimodal endourologic approaches, all stents and associated stones were eventually removed without any complications and all patients were rendered stone and stents free. **Conclusion:** Multimodal endourologic approaches can achieve safe removal of forgotten stents, if treatment is tailored to the volume of encrustation and associated stone. Imaging evaluation and documentation of negative urine culture are imperative prior to any attempt to remove the stent.

POD 14 – 05**Role of retrograde intrarenal surgery in managing renal calculus in abnormal renal anatomy and physically challenge patients****Samir Swain, Mishra JJ, Singh GP, Hota D**

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Renal stone management techniques are changing continuously day to day. The newer technique is being utilised for all possible scenario of renal stone. Physically challenged patients like scoliosis, paraplegia, cerebrovascular accident and abnormal renal anatomy like calyceal diverticula, infundibular stenosis, horse shoe kidney, and solitary malrotated kidney are the real difficult situations. We present the cases of all the types successfully managed with RIRS with Laser lithotripsy from aug 2012 to aug 2015. There were 10 cases of infundibular stenosis, 5 calyceal diverticula, 6 horse shoe kidney, 3 paraplegics, 2 CVA case and rest 1 case for each. All cases were done under general anaesthesia. Hospital stay was 1.5 days on average. There were no post operative significant complications. No

case was subjected to ancillary treatment. RIRS should be considered to be superior technique to deal with renal stones in the above cited situations. The patients profile, satisfaction and outcome are definitely far better than any other available modalities.

POD 14 – 06

Bilateral simultaneous PNL versus staged PNL our experience

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Introduction: This presentation is about Bilateral Simultaneous PNL vs staged PNL done in our institute. **Objective:** Aim is to evaluate the Safety and Efficacy of Bilateral Simultaneous PNL over Two staged PNL. **Material and Methods** 42 Cases with bilateral renal stones were included in the study which have been subjected to either Bilateral Simultaneous PNL or two staged standard PNL. Data were collected and compared with available data on two staged PNL vs Bilateral Simultaneous PNL in terms of Stone free rate, blood loss per operation, Blood transfusion rate, Days of hospitalization and Convalescence. Results 21 patients were operated by Bilateral Simultaneous PNL compared with equal number of staged PNL which are qualifying the criteria selected in the study. 6-10% ancillary procedures were required, significant blood loss was seen in 2-6%, day of hospital stay 3-7 days in Bilateral Simultaneous PNL group. **Conclusion:** Our study showed Bilateral Simultaneous PNL is superior in terms of Stone free rate, blood loss per operation, Blood transfusion rate, Days of hospitalization and Convalescence in selected group of patients harboring bilateral renal stones.

Podium Session 15: RECONSTRUCTIVE UROLOGY AND STRICTURE URETHRA – 1

POD 15 – 01

A retrospective analysis of outcome of treatment modalities in stricture urethra in a single hospital

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Introduction: Idiopathic and iatrogenic factors are generally considered the most frequent causes of stricture. The diagnosis of urethral stricture is usually established by uroflowmetry, micturating cystourethrography and retrograde urethrography. The type of treatment depends on the location and length of the stricture. **Objective:** To analyze retrospectively the results obtained in our hospital in male patients who underwent surgical treatment for urethral stricture by different techniques. **Methods:** Duration - March 2010 to June 2015. Number - 130 patients of anterior urethral stricture. **Exclusion criteria:** Patients who underwent surgery for bladder neck stricture after radical prostatectomy, simple meatotomy, primary hypospadias repair and posterior urethral distraction defects due to pelvic fracture. All the patients were evaluated by uroflowmetry, RGU, MCUG, cystoscopy and urine cultures. Successful treatment was defined as normal voiding without need for instrumentation or dilation, Maximum flow rate >15 ml/min and no evidence of stricture on urethrography or cystoscopy. **Results:** Success rate in our series – Dilatation - 34.78% - VIU - 35% - End to end anastomosis - 91.4% - BMG urethroplasty - 90.38% - McAninch urethroplasty - 92.8% - Perineal urethrostomy - 100%. **Conclusion:** The treatment of urethral strictures should be individualized, taking into account the location, length and extent of spongiofibrosis. One attempt of dilatation or VIU should be given initially in strictures less than 3 cm long. Urethroplasty has achieved acceptable long term success even in cases who have received previous multiple treatments and also in patients with long strictures.

POD 15 – 02

Longitudinal dorsal visual internal urethrotomy with transverse closure for short bulbar strictures

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Introduction: Most centers perform DVIU for short segmental bulbar strictures which is fraught with high failure rates. Excision and EE

urethroplasty remains the only option in such situations. Herein a newer technique is described that entails the advantageous aspects of open as well as endoscopic styles of stricture management. In select case it is a simple, less time consuming novel operation with promising results. **Materials and Methods:** Between Jan 2012 and June 2015, 14 patients with short segmental bulbar strictures who after failed VIU procedures in the past, underwent open urethroplasty. After dissecting the urethra, they were subjected to a through and through DVIU of the strictured segment with an intention of doing a transverse closure (Heineke-Mikulicz principle i.e. longitudinal stricturotomy with transversal closure of the urethra). **Results:** Amongst the 14, in the initial 3 cases, the length of incision was 3, 3.5 and 4 cms respectively. The 3rd patient with the 4 cm incision had persistent pain and difficulty in erection noticed 2 weeks after catheter removal. In the subsequent 11 patients, in 3 patients the length of urethrotomy was more than 4 cms and were subjected to Buccal mucosal graft substitution. The remaining 8/11 of these patients underwent good periurethral fibrous tissue excision followed by tension free transverse closure using 4/0 vicryl over a 16 Fr Silicon Foley catheter. All the 10/14 patients had their catheter removed after 4 weeks. All came for follow up till 4 and 8 weeks. All had good unobstructed urinary flow rates on uroflowmetry till this time. 2 patients reported of mild post void dribble. 2 had penile pain on erection but denied any demonstrable “chordee”. 1 patient had severe neuralgic pain in both lower limbs which was probably lithotomy position related, but had no urinary complaints. Of these 10 patients, 3 have had a longer asymptomatic follow up (6 to 18 months). Only 1 patient complained of weakening of his stream noticed 3 months after catheter removal. He improved with urethral dilatation. Regarding the 6 patients who did not report after 4-8 weeks of initial follow up 5 could not be traced in their remote villages and hence is presumed that they are doing well. 1 confirmed over his mobile phone that he had no complaints. **Conclusions:** Although in selected cases, Urethroplasty using Ventral longitudinal incision and closure by Heineke-Mikulicz principle is in vogue, Dorsal urethrotomy technique for this situation is seldom described. The technique presented here, resorts to Dorsal Visual Internal Urethrotomy once the urethra has been mobilized. Search in literature did not reveal resorting to DVIU to make the longitudinal incision as done here. By this method, which is very convenient for every urologist, the incision is very precise. The other point to be highlighted is that the length of urethrotomy incision achieved is more when a dorsal incision is made as compared to ventral. However the length of the incision should be restricted to maximum 3.5 cms. With a urethrotomy beyond 4 cms, the risk of pain during erections increases. In this situation a Buccal mucosal graft must be substituted.

POD 15 – 03

Combined ventral onlay + dorsolateral onlay BMG urethroplasty in panurethral strictures: Good alternative for complete dorsal onlay urethroplasty

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Introduction: Panurethral strictures are currently managed by single stage repair with complete dorsolateral onlay BMG urethroplasty. Combined ventral onlay BMG for bulbar urethra and dorsolateral onlay BMG for penile urethra is a good alternative technique having advantages like non mobilization of bulbar urethra hence preserving its vascularity and the ease of the procedure. **Objective:** To assess the outcomes of combined ventral bulbar onlay with dorsolateral penile onlay BMG urethroplasty for panurethral strictures. **Materials and Methods:** This retro-prospective study included 19 patients with panurethral strictures who underwent single stage combined ventral plus dorsolateral BMG urethroplasty from June 2009 to May 2014. Outcome was categorised as successful, failure and satisfactory on the basis of symptom relief, postoperative Qmax, urethroscopy, urethrogram and need for further intervention. The results were compared with our previous series of 34 patients who underwent complete dorsolateral onlay BMG urethroplasty from September 2005 to march 2013. **Results:** Mean patient age was 41 years (range 26-63). The etiology was catheterisation (15.8%), Lichen sclerosis (31.6%), infection (15.8%) and idiopathic (36.8). Mean stricture length was 10.2 cm (4.8-14.2). Mean follow-up period was 46 months (15-62). The success rate of combined approach was 89.4% as opposed to 87.5% for complete dorsolateral approach in our series. 2 patients developed distal anastomotic stricture which were managed by VIU (satisfactory outcome

100%). Conclusion: Because of its ease and bulbar urethral vascularity preserving approach, combined ventral onlay and dorsolateral onlay BMG urethroplasty can be a good alternative to complete dorsolateral onlay BMG urethroplasty. Short term results are encouraging.

POD 15 – 04

Corethrough OIU with transurethral resection of fibrotic scar: An alternate endoscopic management for posterior urethral distraction defects?

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Aim and Objectives: To assess the efficacy and outcome of primary corethrough optical internal urethrotomy (OIU) with transurethral resection (TUR) of fibrotic scar in patients with posterior urethral distraction defects (PUDD). **Materials and Methods:** A prospective study conducted from March 2011 to August 2015 with total 29 numbers of patients with PUDD of less than 2 cm length estimated by on table bougiogram underwent core through OIU with TUR of fibrotic scar using standard TUR loop till punctate hemorrhages are seen. Trial without Catheter given at 3 week and follow up was carried out at 3 months interval up to one and half years with uroflowmetry, retrograde uethrogram and cystopanendoscopy when ever indicated. All patients were advised to do regular self dilatation. **Results:** Age of patients ranged from between 19-55 years (Mean-37) Out of nineteen cases, eleven patients are voiding with good stream at the end of one and half year follow up without requiring any intervention. Eight patients could not void well at 3 month follow-up and required intervention. Out of 8 failed cases three patients required OIU and 5 patients subjected for excision and perineal end to end anastomotic urethroplasty. **Conclusion:** Transurethral resection of fibrotic scar with corethrough OIU could be an useful alternative endoscopic procedure can be tried in patients with posterior urethral distraction defects of less than 2 cm failing which standard open surgical correction can be done. However, further studies with more number of patients with longer follow up are required to establish the efficacy of this novel innovative procedure.

POD 15 – 05

Pelvic fracture urethral distraction injuries: Early results of progressive perineal repair

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Introduction: Pelvic-fracture urethral injuries are the result of blunt pelvic trauma and accompany about 10% of pelvic-fracture injuries. Distraction-injuries are for all intents unique to the membranous-urethra. The timetable for the reconstruction of pelvic-fracture-urethral injuries is determined by the type and extent of associated injuries. If possible, it is desirable to proceed within 4-6 months after trauma. In the majority of cases, urethral injuries are not long and is amenable to a technically straightforward mobilization of the corpus-spongiosum with a primary-anastomotic technique. We retrospectively analyzed our series of these distraction-injuries presenting to us in the last 5-years and report the early outcome. **Materials and Methods:** All patients presenting with urethral distraction injuries associated with pelvic fractures were initially assessed, stabilized and managed with suprapubic-catheter insertion. Progressive-perineal-urethral repair was performed atleast 3-months following injury. Post-operative complications and early outcome was assessed in all these patients. **Results:** During the study period Jan 2010-Dec 2014, 26 male patients with a mean age of 33 years presented with pelvic-fracture and posterior-urethral-distraction defects. Progressive-perineal-repair was performed atleast 12 weeks later. The repair needed corporal separation in 13 cases and infra-pubectomy in 3 cases. 1 patient failed to void following urethral catheter removal and developed a severe stricture at the repair-site needing a repeat surgery. 24 patients voided well after catheter removal and are voiding adequately at a mean-followup of 36 months. 1 patient needs catheter self calibration repeatedly. **Conclusion:** Using the perineal approach and several maneuvers, it is virtually possible to repair all distraction-injuries through a perineal approach. Short term outcomes are good.

POD 15 – 06

Prospective analysis of erectile dysfunction after urethroplasty

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Introduction and Objective: Urethral reconstructive surgery provides long term cure for urethral stricture disease in most patients. It is a widely accepted and efficacious treatment modality. However, urethroplasty involves dissection near neurovascular structures responsible for normal erectile function. De novo erectile dysfunction (ED) post urethroplasty is a known complication. Hence an attempt is made to study the incidence of ED after urethroplasty. **Methods:** From January 2014 to January 2015, 48 out of 87 patients undergoing urethroplasty at our institution were eligible for this prospective study. Patients with preexisting ED, diabetes mellitus and who underwent prior urethroplasty were excluded. Patients were assessed using International Index of Erectile Function-5 score. Questionnaire was administered preoperatively and at 3 and 6 months postoperatively. **Results:** Stricture location was in anterior urethra in 40 patients and 8 patients had pelvic fracture urethral injury (PFUI). Anastomotic urethroplasty was done in 26 patients and substitution urethroplasty in 22 patients. All patients had normal erectile function preoperatively. The incidence of ED at 3 and 6 months postoperatively was, 23 (57.6%) and 9 (22.4%) in anterior urethral stricture group and 5 (62.5%) and 3 (37.5%) in PFUI group respectively. **Conclusion:** Many patients undergoing urethroplasty develop de novo ED. The incidence of ED following urethroplasty is more in PFUI than in anterior urethral stricture. The high incidence of non-resolving ED in urethroplasty for PFUI is probably attributable to dissection near neurovascular structures during surgery. Most patients recover erectile function by 6 months postoperatively.

Podium Session 16: URO-ONCOLOGY AND ADRENAL DISEASES - 4

POD 16 – 01

The effectiveness of R.E.N.A.L nephrometry scoring for predicting perioperative outcomes in nephron sparing surgery

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Introduction and Objectives: Nephron sparing surgery (NSS) has now become the treatment of choice for T1 renal tumors. It has shown equal oncological efficacy and better functional outcome when compared to radical nephrectomy. In this study we analyze the effectiveness of R.E.N.A.L (Radius, Exophytic/endophytic, Nearness to collecting system/sinus, Anterior/posterior, Location relative to polar lines) nephrometry score for predicting perioperative outcomes after NSS. **Methods:** The study included 38 patients who underwent NSS in our institute from August 2013 to June 2015 performed by a single surgeon. R.E.N.A.L nephrometry score was calculated using CECT of abdomen. Tumor complexity was stratified into 3 categories low (4-6), moderate (7-9) and high (10-12) complexity. Perioperative outcomes were compared between the 3 complexity groups. P value < 0.05 was taken as statistically significant. **Results:** Among the 38 patients who underwent NSS, 63.2% were low, 26.3% were moderate and 10.5% were high complexity tumors Margins were negative in all cases. Mean operating time was 123 min, 139 min and 135 min for low, moderate and high complexity lesions respectively (p value - < 0.001). CIT was 37.3 min, 46 min and 47.5 min for low, moderate and high complexity lesions respectively (p value - < 0.001). Estimated blood loss was 206 ml, 320 ml, 325 ml for low, moderate and high complexity lesions respectively (p value - < 0.001). Opening of collecting system and postoperative complications were more frequent with moderate and high complexity tumors, values of which were not statistically significant between the 3 groups. **Conclusion:** Our study concludes that there is statistically significant correlation between increasing R.E.N.A.L score and surgical complexity. Thus R.E.N.A.L nephrometry scoring helps in better preoperative planning and counseling of patients.

POD 16 – 02**A study to evaluate prognostic value of lymph node density in carcinoma urinary bladder in patient under going radical cystectomy****Pal Mahendra, Bakshi Ganesh, Prakash Gagan**

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Introduction and Objectives: Radical cystectomy (RC) and pelvic lymph node dissection (PLND) is standard treatment for muscle-invasive bladder cancer. Multiple nodal factors including number and extent of involved nodes, perinodal extension (PNE) and lymph node density (LNd) can predict survival. This study attempts to analyse the prognostic importance of LNd and to evaluate its cutoff value that co relate with survival in patients who underwent RC and PLND. **Materials and Methods:** Retrospective analysis of patients who underwent RC with PLND between 2005 and 2010. Age, extent of PLND, lymph node removed, presence of PNE and LNd were identified as interrelated variables. We divided patients into two categories LNd <15 and >15. Factors affecting survival were analysed using Kaplan-Meier plots and log rank test to test for significance. **Results:** On cox regression analysis patients with higher tumor stage, perinodal extension and higher LNd were found to have significantly poorer survival both in univariate and multivariate analysis. Patient with LNd less than 15 has better survival than LNd more than 15. Analysis between groups based on LNd shows statistically significant difference in mortality observed across these groups with 18.3% and 92.3% deaths in LNd less than 15 and more than 15 respectively. **Conclusion:** LNd is the one of strongest predictor of cancer-specific survival. Proposed LNd threshold have shown to be independent predictors of cancer-specific survival. It can be used as predictor of disease recurrence and may helps in selecting the patients who need adjuvant treatment.

POD 16 – 03**Drain fluid creatinine: A reliable marker to identify early leaks following radical cystectomy****Pal Mahendra, Bakshi Ganesh, Prakash Gagan**

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Introduction: Anastomotic leak from the uretero-conduit anastomosis is a known complication following ileal conduit/neobladder. Differentiating this anastomotic leak from other causes of increased drain output can be difficult. In this study we evaluate the role of drain fluid creatinine in characterizing the causes of urinary leak. **Materials and Methods:** Retrospective analysis of all patients undergoing radical cystectomy was done. Drain fluid, serum and urine creatinine level estimation along with a contrast enhanced CT scan was done in all patients with a suspected leak. Fluid creatinine five times the serum levels were considered positive. Sensitivity, specificity, positive and negative predictive value of fluid creatinine in detecting urine leak was determined. **Results:** Among the 67 patients evaluated, urine leak was seen in 13 patients (19.4%) that is 8/55 patients with ileal conduit and 5/12 with neobladder reconstruction. The mean fluid creatinine among patients without a leak was 1.1 mg/dL and those with leak was 36.38 mg/dL. Mean drain fluid to serum creatinine ratio in patients with leak was 29.9 mg/dL while in those without leak it was 0.98 mg/dL (Range: 0.7 to 107.7). The sensitivity, specificity, positive and negative predictive value were 84.62%, 100%, 100% and 96.43% respectively. **Conclusion:** Drain fluid to serum creatinine ratio is a cheap and highly accurate test in detecting the presence of urine extravasation following urological procedures and can act as a surrogate marker to determine the group of patients who would require further radiological evaluation.

POD 16 – 04**Role of multiparametric MRI in biopsy naive suspected prostatic cancer: a noninvasive triage test; assessment of apparent diffusion coefficient in diagnosis and prediction of aggressiveness of prostate cancer****Pandey Himanshu, Sood Swapan, Agrawal Suresh**

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Introduction and Objectives: Currently diagnosis of carcinoma prostate depends mainly on serum PSA, digital rectal examination followed by

transrectal ultrasound (TRUS) guided prostate biopsy which is well known to be associated with over diagnosis, overtreatment, missed diagnosis and poor risk stratification. Search for ideal diagnostic modality is always on and with this respect multiparametric MRI (MpMRI) with diffusion weighted imaging (DWI) and apparent diffusion coefficient (ADC) values has shown promising results in recent articles. We attempted to compare DWI and ADC values with prostate biopsy and Gleason score to determine relationship among these and to explore the possibility for noninvasive assessment of tumor aggressiveness. **Methods:** 150 cases were retrospectively reviewed in whom prebiopsy MRI and TRUS guided prostatic biopsy were done on clinical suspicion of prostate cancer with DRE and/or serum PSA. Written consent was obtained in advance. Patient with prior prostate surgery, radiotherapy, hormonal therapy and contraindications to MRI were excluded. Correlation among MRI finding, biopsy report and Gleason score was evaluated. **Results:** Significant correlation was seen between lesions showing diffusion restriction and malignancy on biopsy report. ADC values also showed positive correlation with proven malignancies and Gleason scores. Inverse relationship was observed between Gleason score and ADC values. MpMRI showed sensitivity, specificity, positive predictive value and negative predictive value of 97.10%, 69.13, 72.82% and 96.55% respectively. **Conclusion:** MpMRI including DWI and specifically quantitative ADC values may help diagnosing prostate cancer before biopsy and may help risk stratification and thus indirectly determining the cancer aggressiveness.

POD 16 – 05**Prospective analysis of laparoscopic versus open radical nephrectomy for greater than 7 cm renal tumors****Patel Rajkumar, Khan Mubashir, Jain Nitesh, Murali Venkataraman**

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Introduction: Renal cell carcinoma is the third most common urologic cancer and accounts for 2% to 3% of all cancers in adults. The treatment modalities of renal cell carcinoma depend on different tumor characteristics, including tumor size, expansion, and location. Surgical resection either open or laparoscopic, remains the standard of care for localized renal cell carcinoma. **Methods:** We have done prospective comparative analysis of 60 patient having renal cell carcinoma, undergoing either Laparoscopic Radical Nephrectomy (LRN) or Open radical nephrectomy (ORN) for tumour size more than 7 cm. **Results:** As compared to ORN, LRN for greater than 7 cm renal tumors results in better cosmesis, less pain, decreased blood loss, lower analgesic requirement. As compared to ORN, LRN has longer operative time, but it was not statistically significant. Intraoperative or postoperative complications, overall survival, cancer-specific survival and recurrence-free survival were comparable in both the groups. **Conclusion:** LRN is feasible and efficacious for large renal tumors (greater than 7 cm). Meticulous hemostasis and careful dissection is vital for safe LRN, particularly large tumors. LRN for large renal tumors achieves a degree of cancer control similar to that obtained with open radical nephrectomy. Urologists with laparoscopic experience should consider expanding their indications for LRN to include large renal tumors.

POD 16 – 06**Evaluation of the role of serum p53 as a biomarker in the patients of prostatic carcinoma****Pushpendra Kumar Shukla, Aditya Kumar Singh, Vishwarup Guha, Sartaj Wali Khan, Vajir Singh Rath, Sameer Trivedi, Dwivedi US**

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Objectives: To assess the potential clinical utility of the levels of the p53 protein in serum, as a novel serum biomarker of prostate cancer, that could be used in conjunction with levels of serum PSA. **Patients and Methods:** 43 cases of suspicious carcinoma prostate who came for TRUS guided prostate biopsy in the department of urology were included in the study. Diagnosis and staging of carcinoma prostate was done by USG KUB, Serum PSA, Histopathological report, MRI, Bone scan. 20 age matched patients with normal renal function, with no evidence of any other malignancies were included in control group. Serum p53 Assay done in all patients and control by standard sandwich enzyme-linked immune-sorbent assay

technology. Results: 30 patients of carcinoma prostate and 13 patients of BPH with 20 age matched controls were identified for the study. In prostate cancer patients mean age was 67.13 ± 10.37 years (range 48-84 years), mean prostate volume was 44.28 ± 11.62 cumm (range 20.8-85 ml), mean PSA for was 67.67 ± 70.63 ng/ml. Mean serum p53 level was 2.50 ± 0.68 pg/ml in cases of Carcinoma Prostate, 1.27 ± 0.44 pg/ml in BPH patients and 1.12 ± 0.68 pg/ml in controls. Value of serum p53 in prostate cancer group was not only higher, but also statistically significant (p value < 0.001) in comparison to BPH & control group. Serum p53 level is higher in the metastatic group (3.08 ± 0.64 pg/ml). Conclusion: The significantly raised levels of serum p53 in patients of prostate cancer as compared to BPH patients and age matched controls is definitive indicator of the potential of serum p53 as a biomarker in patients of prostate cancer.

Podium Session 17: BENIGN PROSTATIC HYPERPLASIA – 1

POD 17 – 01

Comparative study of tadalafil and tamsulosin as monotherapy for lower urinary tract symptoms due to benign hyperplasia of prostate

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Introduction: The U.S. Food and Drug Administration approved tadalafil in 2011 to treat the signs and symptoms of benign prostatic hyperplasia (BPH). Tadalafil is a phosphodiesterase-5 (PDE5) inhibitor improves erectile function by increasing the amount of cyclic guanosine monophosphate in the smooth muscle of the corpus cavernosa. PDE5 inhibition also affects concentration of cyclic guanosine monophosphate in the smooth muscle of the prostate, the bladder, and their vascular supply, but the precise mechanism for reducing BPH symptoms has not been determined. Methods: A total of 60 patient presenting with lower urinary tract symptoms (LUTS) due to BPH were selected and randomized with card method to receive either 5 mg tadalafil daily or 0.4 mg tamsulosin daily. Base line Q max, PVR (post void residual), IPSS (International prostate symptom score), IIEF (International index of erectile function-erectile function) were noted at start of study and at end of 12 weeks. Patient with history of drug treatment, history of prostate surgery and raised PSA were excluded from study. Results: Both group were comparable. Both tamsulosin and tadalafil improved symptoms of LUTS. But tamsulosin is slightly more effective than tadalafil but not significantly ($p > 0.05$) in relieving LUTS. But only tadalafil significantly improved IIEF ($p < 0.05$). Both treatments were tolerated well. There was component of subclinical erectile dysfunction in 36 out of 60. Conclusion: Symptoms of erectile dysfunction and LUTS frequently occurs together. These could well be treated with monotherapy of tadalafil. It is still not clear significance of treating subclinical erectile dysfunction.

POD 17 – 02

UWIN score for assessment of lower urinary tract symptoms: Could it replace the AUASI score? - An open label randomized cross over trial

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Introduction: AUA symptom index (AUASI) is the most accepted tool to assess LUTS. UWIN (Urgency, weak stream, Incomplete Void, Nocturia) score is a simplified questionnaire with fewer and more distinctive options omitting 3 questions from AUASI. We sought to identify if UWIN is equally efficient in capturing LUTS and could replace the gold-standard AUASI. Methods: Consecutive consenting male patients with BPH-LUTS were randomized to receive either UWIN/AUASI questionnaire first followed by the other. Education level, time taken to complete and need for assistance were assessed for each questionnaire. Spearman correlation analysis was done. Results: Total of 294 completely filled questionnaire pairs were analysed. Median (IQR) age was 65 (14) years, prostate volume 49 (20) ml, Qmax 11.9 (2.3) ml/second. Correlation was assessed at 3 levels. Between

corresponding UWIN and AUASI items, there was 93-97% correlation. When obstructive and irritative scores were added, correlation was 85% and for QOL scores 89%. Overall, AUASI required more assistance (61% vs 43%, $p < 0.001$), took longer to complete (11.2 vs 4.8 minutes, $p < 0.001$) and required higher educational level for comprehension ($p = 0.02$). Conclusion: UWIN is as effective in capturing LUTS as the gold-standard AUASI inspite of three questions of AUASI being omitted in UWIN. Severity of obstructive and irritative nature of LUTS and quality of life are interpreted similar to AUASI. UWIN is easier to comprehend and rapid, needing lesser assistance even with lower educational status. Multicentric studies with larger number of patients are recommended to assess if three items of AUASI can be safely omitted.

POD 17 – 03

Significance of estrogen receptor alfa and beta in urinary bladder tissue and its clinical correlation in patients with benign enlargement of prostate

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Introduction and Objective: The aim of the present study is to find a correlation between estrogen receptor levels in urinary bladder tissue with clinical effects of benign prostatic enlargement. Expression of estrogen in bladder tissue and its effect on symptoms of benign prostatic enlargement still remains to be resolved. Methods: In this prospective study 17 patients with benign prostatic enlargement undergoing TURP in our department were included in the study. Patients were undergo standard TURP as practiced in our institution along with bladder biopsy. Prostatic tissue and bladder tissue were then sent in 10% formalin to our pathology department. Immunohistochemistry was performed on the micro sections using commercially available monoclonal antibody kits for ER α and ER β . A semiquantitative assay was performed based on percentage of cells staining for receptor and the intensity of staining. Appropriate statistical tests was used. Results: ERs were detected in 58.82% of cases with ER β were more significantly expressed than ER α . No association was found between ER immune reactive score and patients age, PSA, serum testosterone level or prostate size. However an association between ER staining and IPSS score was observed ($P < 0.05$) with more strong association with ER β than ER α . Study also showed significant association between PVR and receptor expression. Conclusion: Little is known about ER in urinary bladder tissue and its impact on symptoms of benign prostatic enlargement. From this study it appears that ER expression in urinary bladder tissue may have role in symptoms of benign prostatic enlargement

POD 17 – 04

Factors determining acute urinary retention secondary to BPH: A prospective study

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Aim: To determine the factors that predict acute urinary retention in patients with benign prostatic hyperplasia by comparing patients presenting with and without retention. Methods: All men presenting with LUTS, with and without retention, clinically and radiologically diagnosed to have BPH were included. All patients age, comorbid illnesses like diabetes mellitus, systemic hypertension, ischemic heart disease, COPD, previous history of AUR were recorded. Symptoms were assessed with IPSS grading. Patients with AUR were asked to record symptoms for one month before retention. Digital rectal examination (DRE) was done. Transabdominal USG was done to estimate prostate size, bladder wall thickness (BWT) and intravesical protrusion of prostate (IPP). Routine haemogram, blood biochemistry, Urine analysis/urine C/S were done. Sr. PSA assessed with immunoradiometric assay. Transrectal biopsy performed, patients with biopsy proved Carcinoma prostate, were excluded. Results: A Total of 127 patients were analysed during a period of 12 months (56 in AUR group and 71 in NON AUR group). The mean, Standard deviation, minimal, maximal values were calculated and baseline parameters analysed using student unpaired t test. All discrete variables were analysed by Chi Square test. Data were analysed using SPSS and $p < 0.05$ was considered statically significant. Symptom severity, previous AUR episodes, high serum PSA

levels, increased size of prostate bladder wall thickness and intravesical prostatic projection were predictors of acute urinary retention.

POD 17 – 05

Clinical correlation between estrogen receptors in prostatic tissue and measures of LUTS in men with BPH

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Introduction: Androgen/androgen receptor (AR) signalling is widely accepted as the key mechanism responsible for development of BPH (Benign prostatic hyperplasia). Ironically, BPH develops at an age when the androgen levels are declining and the efficacy of current drugs for BPH is still limited. There is substantial evidence that estrogen receptors have important role in prostatic growth and pathogenesis of BPH. So the aim of our study was to appraise any correlation between estrogen receptor levels in prostate with clinical measures of BPH. **Materials and Methods:** 45 men aged > 45 years with BPH undergoing TURP were included in our study. Estrogen receptors alpha (ER α) and beta levels (ER β) were measured as percentages in the stromal and epithelial compartments of prostatic tissue specimens using immunohistochemical assays. The receptors level values were correlated with various parameters like age, IPSS (international prostatic symptom score), serum estradiol (E), serum testosterone (T), serum E/T ratio, prostate volume, PSA (Prostate specific antigen), PVR (post void residual volume), and Qmax using appropriate statistical tests. **Results:** There was positive correlation between Prostate size and age, PSA, IPSS. There was significant positive correlation between stromal ER α and age, PSA, prostate size and IPSS. Epithelial ER α correlated with serum estradiol, E/T ratio, prostate size and IPSS. Epithelial ER β positively correlated with serum estradiol and serum testosterone. ER β was absent in stromal compartment. **Conclusion:** Current findings suggest estrogens play an important role in pathogenesis of BPH. Significant correlations with various measures of LUTS suggest that estrogenic action is primarily mediated by ER alpha receptors.

POD 17 – 06

Urodynamic evaluation of transurethral resection of prostate done for benign prostatic hyperplasia: Based on degree of obstruction

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Purpose: We retrospectively investigated the effect of transurethral resection of the prostate (TURP) on the basis of the degree of obstruction seen in preoperative urodynamic study in patients with benign prostatic hyperplasia (BPH) who complained of lower urinary tract symptoms (LUTS). **Materials and Methods:** The subjects of this study were 135 patients who were diagnosed with BPH with LUTS and who subsequently underwent TURP. The Abrams-Griffiths number was calculated from the urodynamic results to divide the patients into the following groups: Unobstructed, equivocal, and obstructed. There were 21 patients (15.5%) in the unobstructed group, 42 patients (31.1%) in the equivocal group, and 72 patients (53.3%) in the obstructed group. The preoperative and postoperative uroflowmetry, residual urine, International Prostate Symptom Score (IPSS), and quality of life (QoL) score were compared between the three groups to evaluate the outcome of the treatment. **Results:** The reduction in the IPSS was 14.4 in the obstructed group, which was higher than the reductions of 12.7 in the equivocal group and 9.5 in the unobstructed group, but this difference was not statistically significant ($p = 0.227$). The QoL score was also not significantly different across the three groups ($p = 0.533$). The postoperative maximum flow rate was significantly improved in all three groups. The obstructed group had an improvement of 7.8 ± 7.2 mL/s, which was higher than the improvement of 3.7 ± 6.2 mL/s in the unobstructed group ($p = 0.049$) but was not significantly different from the improvement of 5.6 ± 6.9 mL/s in the equivocal group ($p = 0.141$). **Conclusions:** TURP led to an improvement in the maximum flow rate and LUTS even in BPH patients without BOO. Therefore, TURP can be expected to improve LUTS in BPH patients without definite urodynamic obstruction.

Podium Session 18: BENIGN PROSTATIC HYPERPLASIA – 2

POD 18 – 01

Effects of short term dutasteride and phytotherapeutic agent on perioperative bleeding, prostate vascularity and postoperative complications in patients undergoing monopolar transurethral resection of the prostate: A prospective randomized double blind placebo controlled study

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Introduction and Objectives: To evaluate whether a short course of dutasteride and phytotherapeutic agent himplasia® before transurethral resection of prostate can reduce perioperative blood loss, prostate vascularity and surgical complications. **Methods:** A total of 120 patients who were planned to undergo TURP were randomly divided into three groups with 40 patients in each group. Group 1 were the control group; Group 2 and Group 3 comprised of the patients who used dutasteride (0.5 mg) and himplasia (2 tablets BD) for 4 weeks before operation respectively. Each group were subdivided into Group A and Group B depending upon preoperative prostate volume (<60 ml/> 60 ml). For each patient total blood loss, total blood loss/time, total blood loss/weight of resected tissue and total blood loss/weight/time was calculated. Prostatic MVD (micro vascular density) was estimated using anti CD 31 antibody. Patients were followed up for one month. **Results:** When comparing the changes in hemoglobin and hematocrit between the Group 1, Group 2 and Group 3, before and after TURP, there is a statistically significant difference only in Group 2 and only in cases of large prostate ≥ 60 mL. Similarly, decrease in prostatic MVD become statistically significant only in Group 2 with large prostate. **Conclusion:** Dutasteride therapy is superior to control and himplasia in reducing intra-operative and peri-operative bleeding only if a large prostate (≥ 60 mL) is being treated.

POD 18 – 02

Holmium laser enucleation prostate: Our initial experience 200 cases

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Introduction and Objectives: To report our initial experience with Holmium enucleation of prostate for BPH. **Methods:** A prospective study including all patients who underwent HOLEP at our institution from Dec 2014 to July 2015. A pulsed 100 W laser with 26 F resectoscope sheath was used. Preoperative assessment includes prostate volume, Qmax, residual volume. **Results:** Mean age 66 ± 8.1 yrs, mean prostate volume 62 ± 34 cc, enucleation time 55 ± 22.9 minute, morcellation time 17.3 ± 14 min, resected weight 40 ± 27.5 min, catheter time 36 ± 14.7 hrs, mean hospital stay 48 ± 26 hr. Mean seru. Hemoglobin and sodium did not drop. 6 patients had extra peritoneal extravasation, maximum gland size was 350 gm, bladder rupture in 1 case. Significant improvement in Qmax (25.1 ± 10.7 ml/sec), PVR and IPSS (0.7 ± 1.3) at follow up compared with baseline. 10% had irritative voiding symptoms self limited by 2 weeks, transient stress wetting in 5. High risk cardiac patients were successfully managed with HOLEP. **Conclusion:** HOLEP represent an effective and safe surgical intervention for BPH.

POD 18 – 03

Comparison of tamsulosin with silodosin in management of acute urinary retention secondary to BPH in patients planned for trial without catheter: A prospective study

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Introductions and Objectives: Acute urinary retention (AUR) secondary to BPH is a urological emergency in men and requires urgent catheterisation. Alpha blockers relax prostatic smooth muscle cells thereby decreasing the resistance to urinary flow and improve voiding after a successful trial without catheter (TWOC). Aim of study is to determine the efficacy of Tamsulosin & silodosin planned for TWOC. **Methods:** It is a on going prospective randomized study started from March 2015. Ethical clearance is obtained. All patients aged >50 yrs presenting with first episode of acute urinary retention secondary to BPH are included in study. A total of 63 patients were catheterized and included into the study. Patients were divided into two groups, Group A patients received silodosin 8 mg once a day for three days and Group B received tamsulosin 0.4 mg once a day for three days. Catheter was removed after three days and patients were put on TWOC. They are followed up for 6 months. **Results:** Both groups were compared in age, serum PSA and prostate volume. In first phase, Group A and Group B had successful TWOC in 46% (14/30) and 66.7% (22/33) respectively. No statistically significant differences were found for IPSS score, post-void residual urine volume and peak flow rate in both the groups. Three patients from silodosin group had AUR after successful TWOC and planned for TURP. **Conclusions:** Tamsulosin is more effective alpha blocker for TWOC as compared with silodosin

POD 18 – 04

Outcome of TURP in benign prostatic hyperplasia with renal failure

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Introduction: Management of a case of Benign prostatic hyperplasia (BPH) with renal failure is challenging. **Aims and Objective:** To evaluate the role of surgical management in reversing renal dysfunction and restoring a normal voiding pattern in patient with BPH with renal failure. **Materials and Methods:** We prospectively reviewed 406 old patients presented with lower urinary tracts symptoms from November 2014 to April 2015. Initial evaluation of patient done as per AUA guideline along with serum creatinine. Patients with e GFR <60 ml/min/1.73 m² and radiological evidence of obstructive uropathy were included in this study. All patients underwent TURP and voiding trial was given on day 3. Before discharge PVR was measured. Further evaluation of patient was done at 1 and 3 months after surgery for review of histopathology report, post operative symptom and renal function assessment. **Results:** Total no of 52 patients of BPH with renal impairment (14.68%) with mean age of 66.63 years were included in this study. The mean duration of symptoms prior to presentation was 18.4 months with mean eGFR 24.34 ml/min/1.73 m². Following TURP, 5 of the 52 patients (9.6%) failed to void spontaneously following removal of catheter. It was noted that all these patients had preoperative residuals over 1 liter and symptom duration greater than 6 months. Histology of the resected prostate confirmed BPH in all cases except one. Twenty nine patients (55.76%) had e GFR remained <60 ml/min/1.73 m² during follow up. Three (5.76%) of these patients remained dialysis dependent. **Conclusions:** TURP restores normal voiding pattern in most of the cases. However renal failure due to bladder outflow obstruction tends to be more refractory. Early and proper management of BPH patients may prevent development of renal failure and its associated complications.

POD 18 – 05

A comparative study of 80W KTP laser photovaporization versus conventional TURP in the surgical treatment of benign prostatic hyperplasia: Our experience in fifty patients

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Introduction: TURP is the 'gold standard' in the surgical treatment for benign prostatic hyperplasia (BPH). But, it remains a difficult procedure to perform with complications occurring in upto 20% of patients which includes a need for blood transfusion, infection, urinary retention,

incontinence, sexual dysfunction and bladder neck stenosis. Lasers are good alternative because of their relatively more safety, haemostatic property and no fluid absorption during prostate ablation coupled with shorter hospital stay and fast recovery. Photovaporization of prostate (PVP) using 80W KTP laser is an advancement in treatment of BPH especially in high risk patient e.g. those on anticoagulants, NSAID and aspirin. Normal saline (0.9%) used for irrigation further remove risk of dilutional hyponatremia i.e. TUR-syndrome. KTP laser PVP is a relatively easy procedure to learn. **Aims and Objectives:** To analyze the outcomes of 80W KTP laser and to confirm its efficacy, safety and durability in the treatment of BPH. **Materials and Methods:** This prospective randomized controlled study was carried out in the Department of Urology, between years 2010 to 2011. One hundred patients (n = 100) of BPH having IPSS ≥12 points and Qmax ≤15 ml/sec were randomized to undergo a TURP or PVP procedure after the standard urological evaluation. Patients suspicious of neurogenic bladder, urethral stricture or prostate cancer were excluded. TURP was performed in a standard fashion using 1.5% glycine and in the post operative, normal saline (0.9%) was used for bladder irrigation period until urine become clear. Catheters were removed as per the Institution protocol. PVP was performed using 80W KTP green-light laser system and a star pulse quasi-continuous wave at 532 nm wavelength with help of lateral deflecting quartz-fiber through laser cystoscope using 0.9% normal saline as irrigant. Various parameters including Qmax, IPSS, prostate volume, PVR, quality of life, sexual dysfunction, dysuria, continence and urinary retention were recorded at various interval. Length of catheterization, operative-time and anticoagulants status of patients was also recorded. **Observations and Results:** Patients were randomly assigned into 2 equal groups. Group-A (gA) patients underwent conventional TURP and group-B (gB) 80W KTP laser PVP. Mean age of patients was 64.8 year (range: 50-80) in gA compared to 66.4 year (range: 57-78) in gB. (1) DRE. In gA, 19 (38%) had Gd-I (1-2 cm), 15 (30%) Gd-II (2-3 cm) and 16 (32%) patients had Gd-III prostate (3-4 cm projection in rectal lumen) whereas in gB, 14 (28%) had Gd-I, 15 (30%) Gd-II, 21 (42%) patients had Gd-III prostate. (2) USG. According to prostatic volume (PV) on USG, in gA, one (2%) had 20 cc PV, 18 (36%) between 20-40 cc, 15 (30%) between 40-60 cc and 16 (32%) patients had PV ≥60 cc whereas, in gB, 2 (4%) had 20 cc, 12 (24%) between 20-40 cc and 17 (34%) had 40-60 cc and 19 (38%) patients had PV ≥60 cc. (3) Mean operative-time taken to perform TURP or KTP procedure was equal in Gd-I prostate i.e. 24 min (SD of 3 and 1, respectively) whereas in Gd-II, this was comparable (46 vs 48 min) and in Gd-III prostate it was 72 vs 77 min. (4) International Prostate Symptom Score (IPSS). In gA, at admission 40 (80%) patients had severe LUTS and 1-wk after the procedure 40 (80%) moderate, 5 (10%) had mild symptoms. After 1-mo, 34 (68%) had mild and 9 (18%) moderate LUTS. After 1-year, 48 (96%) had only mild symptoms. In gB, 38 (76%) had severe and 10 (20%) moderate LUTS at the time of admission. But, after 1-wk 30 (60%) had moderate, 18 (36%) had severe LUTS decreasing to 5 (10%) after 1-mo and 6-mo onward, there was no major change. After 1-year, majority had mild IPSS. (5) Quality of life, was assessed on the basis of standard AUA-questionnaire. In gA, 40 (80%) felt terrible at admission, 1-wk after 38 (76%) felt delighted and 9 (18%) were pleased. A year later, majority (80%) felt delighted and 8 (16%) patients were pleased. In gB, 38 (76%) felt terrible at admission, 1-wk after 30 (60%) felt delighted and 11 (22%) were pleased. One year later, 40 (80%) continued to feel delighted and 10 (20%) pleased. (6) Uroflowmetry. In gA, at admission 15 patients had a mean Qmax (mQmax) of 5.39 ml/sec (range: 2.4-10.8) and after 1-wk mQmax was 15.31 ml/sec (range: 11.8-17.2). One month later, improved to 16.07 ml/sec (range: 12.5-18.3) and no significant change beyond this. In gB, at admission, 15 had mQmax of 6.44 ml/sec (range: 2.3-12.6). After 1-wk, mQmax was 15.17 ml/sec (range: 11.8-16.8) which improved to 15.95 ml/sec (range: 12.5-17.9) after 1-mo. Beyond this, there was no major change. (7) Length of Catheter (LoC). In gA, catheter was removed on 3rd day in all whereas in gB, 49 (98%) had catheter removed on 1st day except one patient in which catheter could be removed on 2nd day because of mild haematuria being on anticoagulant (p value < 0.001, highly significant). (8) Postvoid residual urine (PVR). In gA, 5 (33.3%) had PVR ≤50 ml, 7 (46.6%) between 51-200 ml, 3 had ≥200 ml at admission. After, 1-week 44 (88%) had PVR between 51-200 ml, 5 (10%) ≤50 ml and 1 (2%) between 201-350 ml. After 1-mo, 20 (40%) had ≤50 ml, 30 (60%) between 51-200 ml. After 3-mo, 26 (52%) had PVR <50 ml and 24 (48%) between 51-200 ml with no major change after 6-mo. In gB, 7 (46.6%) had PVR of ≤50 ml, 6 (40%) between 51-200 ml and 2 (6.6%) patients >200 ml at admission. After, 1-wk 40 (80%) had between 51-200 ml, 9 (18%) ≤50 ml, 1 (2%) patients had between 201-350 ml. At 1-mo, 21 (42%) had PVR ≤50 ml, 29 (58%) patients between 51-200 ml. At 3-mo,

27 (54%) had PVR \leq 50 ml and 23 (46%) patients between 51-200 ml. At 6 mo, 28 (56%) had \leq 50 ml and 21 (42%) between 51-200 ml with just one (2%) patient had PVR >200 ml and after 1-year 25 (50%) had \leq 50 ml and between 51-200 ml each. In gb, 35 (70%) had PVR >500 ml on presentation but on subsequent follow-up, none had PVR >500 ml. (9) Anticoagulation. In gA, 6 required blood transfusions (BT) in the immediate postoperative with 2 patients being on anticoagulants. In gB, despite 12 patients being on anticoagulants, none required BT (p value < 0.001, highly significant). (10) Complications. In gA, 6 (12%) patients had dysuria, 35 (70%) retention and 4 (8%) incontinence at admission. But, after 1-wk, dysuria persisted and 5 (10%) patients had incontinence, which improved after 1-mo except in one and none developed retention. After 1-year, only 1 patient had incontinence, which improved following Inj. Deflux in bladder neck. At 3-mo, 30 (60%) complained of retrograde ejaculation (RGE) persisting even on subsequent follow-up. In gB, dysuria was present in 4 (8%) and 35 (70%) had retention at admission. After 1-wk, 35 (70%) complained of dysuria (p value < 0.001). Even after 1-mo, 15 (30%) continued to have dysuria. At 3-mo, 20 (40%) had RGE which persisting in all 20 (40%) patients even after 1-year. Conclusion: KTP laser PVP produces almost equal improvement in terms of IPSS, Qmax & QoL in comparison to TURP in the treatment of BPH. But, the KTP laser takes slightly more time which decreases with learning curve. Although, mild dysuria may persist for some time but the catheterization and hospital-stay is short. Blood transfusion is not required despite patients being on anticoagulation, making KTP laser a safer even in bleeding diathesis.

POD 18 – 06

Role of intravesical prostatic protrusion in predicting postoperative outcomes in patients with benign prostatic hyperplasia

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Purpose: To evaluate the significance of intravesical prostatic protrusion (IPP) for predicting postoperative outcomes in patients with benign prostatic hyperplasia. **Materials and Methods:** A total of 100 patients with a possible follow-up of at least 6 months who were treated with transurethral resection of the prostate (TURP) were analyzed. We divided the patients into two groups on the basis of the degree of IPP: the significant IPP group and the no significant IPP group. We analyzed postoperative changes in parameters, such as the International Prostate Symptom Score (IPSS), IPSS quality-of-life (QoL) score, maximum urinary flow rate (Qmax), and postvoid residual urine (PVR). The IPSS was subdivided into voiding (IPSS-v) and storage (IPSS-s) symptoms. Multivariate logistic regression analysis was performed to identify whether IPP could predict surgical outcomes of TURP. **Results:** Preoperative parameters were not significantly different between the two groups except for total prostate volume and transitional zone volume. Postoperative changes in IPSS, IPSS-v, IPSS-s, and QoL score were higher in the significant IPP group than in the group with no significant IPP. Changes in Qmax and PVR were not significantly different between the two groups. Multivariate logistic regression analysis (after adjustment for age, prostate-specific antigen level, total prostate volume, and transitional zone volume) revealed that the odds ratios (95% confidence interval) of decreased IPSS and IPSS-s in the significant IPP group were 3.43 (1.03 to 11.44) and 3.51 (1.43 to 8.63), respectively (p = 0.045 and 0.006, respectively). **Conclusions:** Significant IPP is an independent factor for predicting better postoperative outcomes of IPSS and IPSS-s.

Podium Session 19: BENIGN PROSTATIC HYPERPLASIA – 3

POD 19 – 01

Transurethral enucleation with bipolar for prostate: Our initial experience

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Introduction: Transurethral Enucleation with Bipolar for Prostate (TUEB-P) is a newer approach at endoscopic enucleation of large benign

prostatomegaly. Being an enucleation procedure, it has distinct advantages over resection techniques and at the same time, the costs involved in procuring and maintenance of an expensive LASER machine are avoided. We present our initial experience with TUEB-P at our Institute. **Materials and Methods:** We operated thirty-two cases of prostatomegaly between August 2014 and August 2015. Olympus Bipolar Saline Resection System with Olympus TUEB-P loop was used along with 26 Fr Resection sheath and Storz Morcellator for morcellation. **Results** The mean International Prostate Symptom Score (IPSS) was 28.5 (9 patients had refractory retention of urine and were on catheter). The mean prostatic size was 128 g (78–198) and the mean cystoscopic prostatic length was 11 cm (8–18). The mean operating time was 93 minutes (72–186), mean drop in Hemoglobin being 0.7 g (-0.9 g–1.3 g) and mean drop in Sodium concentration being 2 mEq/L (-3 mEq/L–4.3 mEq/L). No patients required blood transfusion. One patient needed conversion to saline TURP on account of fibrosis in a post-biopsy setting. Postoperatively transient stress urinary incontinence was noted in 4 patients with a median duration of 3 days (1 day to 27 days). Postoperative mean reduction in IPSS score was of 14.7 points at one month. **Conclusion** TUEB – P is technically feasible and is an effective procedure for prostate of any size and is a lost cost alternative to Laser enucleation.

POD 19 – 02

Comparison of Thulium laser enucleation of prostate and monopolar TURP in terms of efficacy in the early postoperative period and perioperative morbidity

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Aim: comparison of change of serum electrolytes, change of haemoglobin, comparison of postoperative complications, comparison of duration of traction and catheterization and hospitalization between TURP and THuLEP. **Methods:** Patients were subjected to monopolar TURP and thulium laser prostatectomy and the above mentioned data were recorded. **Conclusion:** THuLEP is better than TURP in all major aspects

POD 19 – 03

Correlation between Residual prostatic weight ratio and clinical outcome after transurethral resection of the prostate for benign prostatic hyperplasia: A study

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Introduction: Benign prostatic Hyperplasia (BPH) is the most common disorder of the prostate gland. It is a major cause of morbidity in the ageing men affecting more and more men with increasing age. Transurethral resection of the prostate (TURP) is a safe and effective procedure and remains the standard surgical treatment of benign prostatic hyperplasia despite a variety of treatment alternatives. Presently, the outcome of TURP is assessed in terms of symptom improvement as well as improvement in lower urinary tract function measured by uroflowmetry. While it is well known that there is little correlation between the size of the prostate gland and lower urinary tract symptoms in BPH, it is not entirely clear as to whether and how much outcome after TURP is related to the degree of adenoma removal which is achieved. **Objective:** A prospective trial to determine the effect on symptom improvement and the extent of tissue resection after transurethral resection of the prostate in men with symptomatic benign prostatic enlargement and to evaluate any potential correlation between prostate size and outcome, a new variable the residual prostatic weight ratio (RPWR). **Patients and Methods:** After research review board clearance, the study was conducted From August 2014 to July 2015 at our Institute, a total of 50 patients (mean age 61.6 yrs., range 50–85) with symptomatic benign prostatic enlargement who underwent TURP participated in this prospective study. Patients were assessed preoperatively with the American Urological Association symptom Score, Urinary flow rate measurements (Qmax and Qavg) as well as prostate volumes by transabdominal ultrasound. The amount of tissue resected was weighted. RPWR was derived by dividing the weight after TURP by the initial weight. Clinical outcome was evaluated by the difference in AUA score, Qmax and Qavg before and 2 months after Surgery. **Results:** There was a

significant improvement in AUA score, Qmax and Qavg postoperatively. Maximum numbers of patients undergoing TURP had RPWR in the range of 51-60% (mean RPWR 49.9%). Mean overall change in AUA Score, Qmax and Qavg was 12.04, 8.27 ml/sec and 6.64 ml/sec respectively. There was negative correlation between the RPWR and the DAUA, DQmax and DQavg ($r = 0.42, 0.067$, and 0.09 respectively). Smaller the RPWR larger is the DAUA, DQmax, DQavg and vice versa. Conclusion: Symptomatic improvement after TURP will also depend on the amount of tissue removed and the smaller the RPWR after TURP the better the clinical outcome.

POD 19 – 04

Autonomic nervous system activity in patients with lower urinary tract symptoms secondary to benign prostatic hyperplasia estimated by heart rate variability

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Introduction: Aging induces autonomic nervous system (ANS) dysfunction with increased sympathetic drive. Benign Prostatic Hyperplasia (BPH) is responsible for lower urinary tract symptoms (LUTS), and its pathogenesis is complex. **Objectives:** The aim of our study was to estimate the ANS activity in BPH patients with LUTS using frequency domain analysis parameters of heart rate variability (HRV). Additionally, the relationship of ANS activity to the subjective measures of LUTS, and the objective measures of BPH, as well as the biometrical variables, were investigated. **Materials and Methods:** The study was performed on 30 men with LUTS secondary to BPH. We performed biometrical and urological estimations. ANS activity was assessed by HRV measurements in resting conditions (KUBIOS SOFTWARE). In the HRV recording, frequency domain analysis parameters were calculated according to fast Fourier transformation and the correlation for ANS activity parameters vs BPH variables were analyzed. The following HRV parameters were taken into consideration: LFnu (LF power in normalized units), HFnu (HF power in normalized), LF/HFnu (normalized ratio of LF power to HF power), Mean RR interval, Mean heart Rate. **Results:** All participants (mean age 69.25 ± 6.7 years) presented Severe LUTS (Mean IPSS = 24 ± 4.2). Mean BMI of the patients was 28.40 ± 2.4 (kg/m²) Normalized values of LF and HF were 46.39 ± 19.0 (%) and 53.58 ± 18.99 (%), respectively. Normalized values of LF/HF ratio is 1.18 ± 1.011 . Mean RR interval values were 822.44 ± 156 (ms). Mean HR values was 75.55 ± 13.3 (beats/min). Mean RMSSD values were 45.0 ± 33 (ms). We observed a higher LF/HFnu in most of the patients denoting that there is a significant sympathetic overactivity in these patients. **Conclusions:** These results demonstrate the sympathetic overactivity of ANS at rest in patients with BPH and LUTS. It is also suggested that in the pathophysiology of BPH, the heightened activity of the sympathetic ANS, and parasympathetic drive are important.

POD 19 – 05

Holmium laser prostatectomy: Single lobe versus multiple lobe enucleation technique

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Introduction and Objective: Transurethral resection of the prostate (TURP) is being challenged by Holmium enucleation of the prostate (HoLEP). During HoLEP, prostate can be enucleated as a single piece (1 lobe), in 2 lobes (Lt./Rt.) or in 3 lobes (Median/Lt./Rt.). We report our experience and outcomes of single lobe versus multiple lobe HoLEP techniques. **Methods:** This prospective study included 82 symptomatic BPH cases who underwent HoLEP between Sept. 2012 and May 2015. 51 patients underwent multiple lobe (Group A) and 31 underwent single lobe enucleation technique (Group B). Patient characteristics, preoperative International Prostate Symptom Score (I-PSS), peak flow rate (Qmax) and post void residual urine (PVRU), prostate volume, operative time, hospital stay and complications were recorded. Patients were followed clinically and with I-PSS, Qmax and PVRU at 1, 3, 6, 9, 12 and 24 months. **Results:** Mean age was 66.5 ± 13.6 years in group A and 64.2 ± 12.6 years in group B ($p = 0.447$), mean prostate size was 55.6 ± 16.4 cm³ in group A and 57.8 ± 15.4 cm³ in group B ($p = 0.548$), mean enucleation time was 87.5 ± 15.6 minutes in group A

and 74.2 ± 14.2 minutes in group B ($p = 0.002$). Mean resection weight was 45.7 ± 12.4 g in group A and 47.6 ± 13.1 g in group B ($p = 0.512$). The IPSS and voiding parameters were significantly ($p < 0.05$) improved in both groups. **Conclusion:** Operative time was less with single lobe enucleation technique of HoLEP. However, both techniques of HoLEP had similar clinical outcomes and complications.

POD 19 – 06

Urodynamic evaluation of benign prostatic hyperplasia patients associated with diabetes mellitus

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Objective: To evaluate bladder dynamics in cases of benign prostatic hyperplasia (BPH) with diabetes mellitus (DM) to predict treatment outcome. **Materials and Methods:** A total of 60 patients with lower urinary tract symptoms having BPH were studied, aged 55-85 (65.21 ± 6.18) years. Duration of voiding symptoms was 6 months to 5 years. These patients were divided into two groups: Group A consisted of 30 BPH patients while Group B consisted of 30 BPH patients accompanied with DM. Both groups were evaluated by the International prostate symptoms score (IPSS), Urine flow rate and Residual volume. All patients underwent urodynamic examination. The results in different group were compared by using correlation analysis. **Results:** In Group A IPSS was higher than Group B while Qmax was lower than group B. There was no significant difference in residual volume ($p > 0.05$) between both groups. There was significant difference ($p < 0.05$) between two groups in terms of Detrusor function. **Conclusion:** The influence of DM on the function of detrusor is significant, probably due to autonomic dysfunction. In cases of BPH with DM, prior knowledge of detrusor function will help in predicting treatment outcome.

Podium Session 20: PEDIATRICS AND CONGENITAL DISORDERS – 2

POD 20 – 01

Penile anthropometry in newborn neonates

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Introduction: Penile dimensions and normal variations of penile measurements in neonates is well known, however similar data in Indian population is sparse. We took up this study to examine and report the penile size of newborn males. **Materials and Methods:** All newborn males in our hospital were examined. The stretched penile length and glandular diameter were measured using vernier caliper. This study was permitted by the institutional ethical committee. The gestational age, birth weight of the neonates was noted. Similarly the age of the mother, height of the mother, history of medications and exposure to pesticides during pregnancy was also noted. The collected data underwent univariate as well as multivariate analysis. **Results:** During the study period Jan 2015 to Aug 2015, a total of 357 male children were born in our hospital. The mean penile length was 2.86, 2.86, 2.54 and 2.32 cm in neonates of gestational age of >40 , 36-39, 32-35 and <32 weeks respectively. The mean penile length was 3.03, 2.73, 2.79 and 2.5 cm with birth weight of >2.9 , 2.5-2.9, 2.0-2.5 and <2.0 kg respectively. The mean penile length was 2.8, 2.9 and 2.792 cm in neonates whose mothers age was >29 , 25-29 and <25 years respectively. **Conclusions:** The study provides the normal range and variations of penile size in male newborns of North Karnataka region.

POD 20 – 02

Bladder ellipticity: A simple radiological marker for predicting abnormal urodynamics in pediatric lower urinary tract diseases

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Introduction: Voiding cystourethrogram and urodynamics are frequently applied studies for diagnosis, follow up and prognostication of functional and anatomic pediatric lower urinary tract diseases. However very few studies exist where an attempt to correlate findings of voiding cystourethrography (VCUG) and urodynamic study (UDS) has been done. The present study was undertaken to find association between bladder shape and capacity on VCUG with UDS findings. **Methods:** Pediatric patients of varied lower tract abnormalities, who were evaluated with VCUG and UDS from January 2012 to May 2015 were included. VCUG parameters like capacity, post void residue (PVR) and a novel score for ellipticity were correlated with UDS parameters like compliance and end filling pressure (EFP) and maximum detrusor pressure (Pdet Max). Ellipticity was defined as $\sqrt{(1-(b/a)^2)}$ and eccentricity ratio as a/b where a is half of the maximum longitudinal diameter and b is half of the maximum transverse diameter. SPSS version 21 was used for statistical analysis. Pearson's correlation test was used to study correlation between bladder capacity and ellipticity with compliance and EFP. **Results:** Total 56 patients were included with mean age of 9.1 (range 1-18). Majority of the patients ($n = 34$, 60%) had PUV rest 8 had DESD and 8 underactive neurogenic bladder. Pearson's correlation between ellipticity and compliance and eccentricity ratio and compliance was statistically significant ($p < 0.05$) with coefficient of -0.376 and -0.26. No significant correlation was found between capacity on VCUG and compliance or EFP on UDS. **Discussion:** VCUG and UDS are two important diagnostic procedures for evaluation of lower urinary tract abnormalities in pediatric patients. However UDS is not frequently available at centers other than academic institutes. Few animal studies have been done to predict urodynamic abnormalities based on VCUG findings. Bladder shapes have been described as spherical, pear shaped and pine shaped in other studies but no objective method was used for comparison with UDS findings. In our pilot study we have attempted to measure the ellipticity of the urinary bladder on VCUG. We found that measures of ellipticity were having significant negative correlation with compliance which means more elliptical or pine shaped the bladder lesser is its compliance. **Conclusion:** Bladder compliance on UDS was inversely related to bladder eccentricity on VCUG and this was statistically significant.

POD 20 – 03

Renal "hump": An undescribed cause for PUJ obstruction

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Introduction: The cause of congenital PUJ obstruction is incompletely understood. The commonly encountered findings are a stenotic PUJ, crossing vessels or a high insertion of ureter at pelvis. Rarely the obstruction may be due to the renal parenchyma itself as in a horse-shoe kidney by its isthmus. Here we describe two cases of PUJ obstruction due to impendence to urinary peristalsis by the lower pole renal parenchyma. **Materials and Methods:** A young adult with right flank pain on evaluation was found to have hydronephrosis due to PUJ obstruction. However CT abdomen showed a protuberant lower pole with the ureter kinking over it, suggesting this as the cause of obstruction. This was confirmed during laparoscopic pyeloplasty. Another 27 year old male presented with right solitary kidney with hydronephrosis and obstructive uropathy. He underwent right AH pyeloplasty and was well post operatively. However 4 years later he presented once again with obstructive uropathy. On evaluation he was found to have crossed fused ectopia with a nonfunctioning, crossed left kidney causing obstruction of the right kidney at the PUJ. He was managed by heminephrectomy which relieved the obstruction. **Conclusion:** Although these two cases presented as classical PUJ obstruction, the cause of obstruction in both cases was the lower pole renal tissue appearing like a 'hump' impeding urinary flow from pelvis. These cases are a diagnostic challenge and need excision of obstructive parenchyma or rerouting of ureter.

POD 20 – 04

46 XY, DSD with 5 alpha reductase deficiency: A case report

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Introduction: 5-alpha-reductase deficiency is a rare disorder of sexual development (DSD) in which 46, XY subjects with bilateral testes have impaired virilization during embryogenesis due to defective conversion of testosterone to dihydrotestosterone. Here, we report one such case. **Case Report:** A 15 year old reared as girl presented with chief complaints of change in voice to male since one year. On examination there are signs of virilization with no gynaecomastia with bilateral palpable gonads in inguinal canal. External genitalia are of female configuration with hypertrophied clitoris (2.5 cm). All of the serum hormone profiles were normal except for raised serum total testosterone. Testosterone to Dihydrotestosterone ratio was elevated before and further increased after hCG stimulation. A chromosomal study revealed a 46, XY karyotype. Ultrasound abdomen revealed no female internal genitalia with blind ending 3 cm vaginal pouch. After counseling of patient, bilateral gonadectomy, reduction clitoroplasty were performed and estrogen therapy was started. Patient is now on regular self vaginal dilatation with regular follow up. **Discussion:** In 5-alpha-reductase 2 deficiency, external genitalia usually are predominately female at birth, so that most affected are raised as females with variable degree of virilization at the time of puberty. Patients with this disorders are usually raised as female after surgical correction. **Conclusion:** In conclusion, the diagnosis of 5-alpha-reductase 2 deficiency should be suspected in adolescents or young adults with the characteristic phenotype and serum hormone profiles. We managed successfully one such case.

POD 20 – 05

Duplication anomalies in children: Single centre experience

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Objective: To report the presentations and outcomes of duplication anomalies in children from a single centre over the last ten years. **Methods:** Records of all children ($n = 17$) who presented to our institution between 2004 and 2014, with duplication anomalies of the upper urinary tract were retrospectively analysed. Pre operative evaluation included MCU, IVU, CT urogram, nuclear renogram and RGU as required. All patients were followed up for a period of 3-5 years. **Results:** The mean age at presentation was 1.8 yr (10 months–5 years). M: F = 7:10. The various final diagnoses and managements include: Ureterocele with preserved upper moiety function = 7 (cystoscopy and puncture) Ureterocele with no upper moiety function = 2 (lap upper heminephrectomy) Ectopic ureter with no upper moiety function = 3 (lap upper heminephrectomy); Ectopic ureter with functioning upper moiety = 1 (ureteropyelostomy); Reflux lower moiety + ureterocele of upper moiety; with good function = 3 (common sheath reimplant); Reflux into lower moiety with no function = 1 (lap lower heminephrectomy). All the patients are symptom free at follow up with no complications. **Conclusions:** Duplication anomalies of upper urinary tract are rare and management needs to be tailor-made, depending on multiple factors.

POD 20 – 06

Modified reimplantation for primary obstructed megaureter

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Objective: To compare the outcomes of classical Cohen's reimplantation with tapering and modified reimplantation without tapering for primary obstructed megaureter (POM) in children. **Methods:** Records of all children ($n = 28$) who underwent reimplantation for POM between 2004 and 2014 were retrospectively analyzed. Those who underwent ureterostomy or initial stenting were not included. During the initial five years classical Cohens reimplantation with excisional tapering was performed (Group I; $n = 15$). Due to some complications in these patients, the technique was modified in the second five years (Group II; $n = 13$). In this group after opening the bladder, the POM was dissected out; distal narrow segment and grossly dilated distal segment around 3-5 cm were excised. A backing was provided to ureter by closing the detrusor caudal to the point of ureteric entry. No attempt at tapering was performed; the ureter was reimplanted again at the original position without crossing or advancement; bladder

mucosa was closed cranial to the new ureteric orifice providing a ureter: tunnel ratio of 1:2. Double J stent was kept in all cases and removed after 6 wks. All patients underwent repeat ultrasonogram and DTPA with indirect cystogram at 1 year post op follow up. Results: The mean age at operation was 1.5 yr (10 months–3 years) with no difference between groups. Left side preponderance was noted in both the groups; no bilateral POM. In group I, 5/15 had to undergo repeat procedures for complications; 2 re-do reimplant for recurrent obstructions; 2 nephrectomy for non functioning kidney; 1 ureterostomy for pyonephrosis. In group II there were no significant long term complications ($p < 0.05$). Post op grade 2 VUR was encountered in 2/13 patients in group II. As they did not have recurrent UTI or scarring, no interventions were required. Conclusions: Classical reimplantation with tapering in primary obstructed megaureter has higher complications, probably due to stasis and stiff distal tapered segment. Further larger studies are warranted to support or negate these findings.

Podium Session 21: RENAL TRANSPLANTATION AND VASCULAR SURGERY – 1

POD 21 – 01

Impact of renal transplantation on erectile dysfunction due to chronic renal failure in male patients

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We studied here the impact of successful renal transplantation on the degree and frequency of erectile dysfunction. Materials and Methods: It is a prospective randomized control trial from August 2012 to January 2015 carried out on 60 patients with end stage renal disease between age 20–55 yrs. They were on regular haemodialysis and were candidates for renal transplantation. Erectile functions were evaluated by history, general physical examination investigations and international index of erectile function(5) during the period of hemodialysis before renal transplantation. After successful renal transplantation these patients were reassessed for erectile dysfunction at 3 and 6 months. Data was described in terms of frequency and percentages in case of categorical variable and Mean \pm SD for continuous variables. Student's t-test was used for continuous data and Chisquare for categorical data. A level of 5% was taken as significant. Results: In this study the age range was 20–55 years with the mean age 39 ± 7.35 years. The study showed that all 60 patients had erectile dysfunction with difference in severity. In pre renal transplantation period 28 (46.6%) patients had severe erectile dysfunction and 32 (53.3%) patients were having moderate erectile dysfunction. There was no patient who had mild or moderately mild erectile dysfunction in the pre renal transplantation period. After three months of renal transplantation 30 (50%) patients had severe erectile dysfunction; 12 (20%) patients had moderate erectile dysfunction; 18 (30%) patients had mild erectile dysfunction. After six months of renal transplantation 22 (36.6%) patients had severe erectile dysfunction; 20 (33.3%) patients had moderate; 16 (26.6%) patients had mild and 2 (3.3%) patients had moderately mild erectile dysfunction. Conclusion: Erectile dysfunction is present in almost all patients of chronic renal failure. There is significant improvement in erectile functions of the patients with end stage renal disease treated by renal transplantation. Finally, ED improvement seems to be higher when the kidney transplantation is performed at lower ages.

POD 21 – 02

Renal functional outcome after live donor nephrectomy

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Aim: To find factors predictive of worsening renal function following live donor nephrectomy. Methods: Retrospective review of electronic medical records of consecutive individuals who underwent Live Donor Nephrectomy from January 2006 to Dec 2010. Results: 370 individuals underwent live donor nephrectomy with mean age of 41.5 years, mean BMI of 23.97 kg/m² and with 228 (61.63%) female donors. Mean serum

creatinine pre operatively, at post operative day 1, at 1 month, 1 year, 5 years and at 9 years was 0.87 mg%, 1.26 mg%, 1.21 mg%, 1.15 mg%, 1.13 mg% and 1.05 mg% respectively. The median duration of follow up was 2 years. 24 individuals had serum creatinine >1.4 mg% after 1 year of follow up with two having >4 mg% after 5 years of follow up. All these 24 individuals were males. Their preoperative serum creatinine was significantly higher compared with overall population ($p = 0.0001$) with mean creatinine 1.11 mg% in this group. One individual was Diabetic and one was hypertensive in this group. No individual required permanent renal replacement therapy. 279 (79.4%) cases were done laparoscopically with no significant difference in preoperative and postoperative serum creatinine values as compared with open cases. 53 (14.3%), 18 (4.8%), 2 (0.5%) and 6 (1.6%) individuals had Clavian grade 1, 2, 3 and 4 complications respectively. Conclusion Renal function is well preserved after live donor nephrectomy in carefully selected patients. Male gender and baseline creatinine greater than one appear to be significant risk factors for deterioration of renal function on follow up.

POD 21 – 03

Robotic kidney transplantation with regional hypothermia: Outcomes analysis of the first 100 cases

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Introduction and Objective: Minimally invasive approaches to kidney transplantation (KT) have recently been described. We developed and described a novel technique of Robotic KT (RKT) using intracorporeal graft cooling. We evaluated peri and postoperative outcomes of RKT and open KT (OKT) and compared them with UNOS database. Methods: From Jan 2013 till May 2015, a total of 100 patients with end stage renal disease underwent RKT and 640 underwent OKT at a tertiary referral center. Primary outcome was post transplant graft function. Secondary outcomes included surgical and immunologic complications, and perioperative parameters. All patients had a minimum follow up of 3 months. Results: The basic characteristics of the two groups were comparable. Mean creatinine at discharge was 1.3 and 1.2 mg/dl in RKT and OKT patients respectively ($p = 0.71$). Operative time, rewarming time and total ischemia time were higher in the RKT group ($p < 0.001$) whereas the blood loss and the incision length was significantly small in the RKT group ($p < 0.001$). Post-operative pain and analgesic requirements were significantly less in patients undergoing RKT ($p = 0.01$). Overall surgical complications were significantly lower in the RKT group ($p = 0.030$). No lymphocele was detected in protocol NCCT done at 3 months in the RKT group (0% vs 17.8%; $p = 0.05$). Death censored graft survival at 1 year was 100% and 98.8% for RKT and OKT groups respectively and was comparable to the UNOS data (93%). Patient survival at 1 year was 97% and 99.1% for the RKT and OKT groups respectively. Conclusions: RKT with regional hypothermia is safe and easily reproducible. Early and medium term functional outcomes are equivalent to OKT.

POD 21 – 04

Can the DJ stent be dispensed ? A prospective randomised study in renal transplant recipients

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Introduction: Use of DJ stent in renal transplantation to prevent postoperative complications like urine leaks or ureteral strictures is well-known. However, routine intraoperative placement of DJ stents at the time of ureteroneocystostomy is debatable. Aims and Objectives: A prospective randomized comparative study to evaluate the incidence of urologic complications like UTI, Urinary leak and obstruction with and without a DJ stent during ureteroneocystostomy. Materials and Methods: Prospective and randomized controlled study. Done from Nov 2012 to July 2015. Out of 176 consecutive renal transplants, 170 were included into the study. All patients were live related renal transplant recipients. Excluded patients 1. delayed graft function 2. hematoma compression and ureteric leak 3. Renal artery thrombosis. 4. sepsis and postoperative death. Results: Computer based randomization was done in to two groups of 85 each. Serum creatinine evaluated at the time of discharge, 1st month and

3rd month respectively. P value of serum creatinine between two groups in first and third months are 0.65 and 0.18 respectively which is not statistically significant. Overall, there was no difference in the incidence of UTI between the two groups. Even though there is higher incidence of UTI in stented group (9%) compared to unstented group (7%). p value is 0.58 which is not statistically significant. In unstented group 6 patients developed ureteric dilatation but there is no evidence of obstruction as serum creatinine and renogram were normal. Discussion: Even if stents do reduce the incidence of complications, in atleast 95% of patients their use would be unnecessary. In our study, we noticed that there was no difference between stented and unstented renal transplant recipients in the incidence of urological complications. Most studies report no significant difference in the rate of UTI between stented and unstented patients. Conclusion: Routine use of stents may not be indicated during Kidney transplantation. Careful surgical technique with selective stenting of problematic anastomoses yields similar results. If stent is used case notes are flagged and patient should be informed that stent must be removed.

POD 21 – 05

Outcome and complications in deceased donor renal transplantation: Our experience of 46 cases

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Introduction and Objectives: The aim of this study is to evaluate outcome and complications associated with deceased donor renal transplantation done during the period of August 2012 to June 2015. **Materials and Methods:** During this period total 46 Deceased donor kidney transplantations were performed. All these patients were regularly followed up for Complications and outcome evaluation. **Results:** Average cold ischemia time was 4 hrs 35 minutes. Out of the 46 deceased donor renal transplantation 2.1% patient had hyper acute rejection, 8.7% had acute graft rejection while 19.5% had delayed graft function. Infective complications including graft kidney pyelonephritis were seen in 5 patients, 3 patients had lymphocele. Wound related complications were seen in 3 patients. Serious vascular complications including renal artery thrombosis were seen in 2 patients. Pyelo-Ureterostomy was done in 2 patients for ischemic ureteric complications. Post operative mortality was 10.8% (5 patients). Vascular complications were more common in donor kidneys with multiple vascular anomalies. **Conclusions:** Vascular complications were more in cases of multiple vessels. Early diagnosis and prompt intervention of surgical complication resulted in better graft survival & function. Careful graft retrieval and implantation is important to minimize the incidence of complications.

POD 21 – 06

A prospective study of donor and recipient outcomes of retroperitoneal laparoscopic donor nephrectomy in obese versus non obese donors

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Introduction: Laparoscopic donor nephrectomy is the standard of care for living kidney donors. Retroperitoneal laparoscopy is a well accepted approach for living kidney donation. Applicability of retroperitoneal laparoscopic donor nephrectomy (RLDN) has not been assessed in obese donors. In this study we analyzed the operative parameters and complications of RLDN in obese and non-obese donors and its impact on recipients. **Materials and Methods:** A prospective study comparing obese and non-obese donors undergoing RLDN was conducted at our institute. A total of 100 donors who underwent laparoscopic donor nephrectomy with retroperitoneal approach were analyzed. Donors were divided in to two groups according to body mass index (BMI) – (a) BMI >30 kg/m² (b) BMI <30 kg/m². The following outcomes were examined - intra-operative complications, warm ischemia time (WIT), operative time, length of hospital stay and recipient outcome in terms of graft function. **Results:** Outcomes of two groups were compared. Out of 100 donors, 20 cases were obese (group a). Mean operative time was 202 and 218 minutes in group a and group b respectively (NS). Mean WIT was 170 and 180 seconds in group

a and in group b (NS). Average blood loss was 45 and 35 ml in both groups (NS). Mean hospital stay was 3.9/3.8 days in group a and group b (NS). Graft function (serum creatinine) at one month was equal in both groups. **Conclusion:** Donor and recipient outcomes after RLDN are similar in obese and non-obese donors. RLDN may safely be offered to obese donors.

Podium Session 22: RENAL TRANSPLANTATION AND VASCULAR SURGERY – 2

POD 22 – 01

Basilic vein transposition technique: An alternative autogenous arteriovenous access: A single centre experience

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Introduction: Primary use of the autogenous arteriovenous access is recommended by NKF-DOQI (National Kidney Foundation-Dialysis Outcomes Quality Initiative) guidelines. In spite of troublesome comorbidities associated with Basilic vein transposition (BVT), it is still the most preferred technique when autologous veins are not suitable to construct radio-cephalic and brachio-cephalic arteriovenous fistula (AVF). The present study highlights our experience with BVT with follow-up of 2 years. **Methods:** A total of 205 AVF performed between June 2013 to May 2015. Out of this 16 brachio-basilic AVF were constructed with superficialization of the basilic vein. 10 males and 6 females with median age of 46 years were operated. A 3-cm horizontal incision was made in antecubital fossa to expose brachial artery and basilic vein. Multiple longitudinal separate second skin incisions (2-3 cm) were made to explore proximal part of basilic vein. Side branches of the vein were isolated and ligated. The divided basilic vein in antecubital fossa was brought over fascia through newly created subcutaneous tunnel followed by end-to-side anastomosis. **Result:** Mean follow-up was 2 years. Mean time to first puncture and use of the fistula time was 48 days (range 30-52). The primary patency of BVT fistula was 100% and 88% whereas the secondary patency were 94% and 81% at 1 and 2 years respectively. Lymphorrhoea occurred in 1 patient which resolved in a month. **Conclusion:** BVT is an alternative method with excellent initial maturation and functional patency rates requiring less extensive skin incision and surgical dissection.

POD 22 – 02

Ureteric complications following open and robotic renal transplantation: 5 years single center experience

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Introduction: Ureteral complications in renal transplantation occur in approximately 8%-10% of renal transplant recipients leading to graft dysfunction and significant morbidity. We present our experience with ureteric complications following both Open (OKT) and Robotic (RKT) Kidney Transplantation, its management, long term graft and recipient outcomes. **Methods:** We have retrospectively analysed 1265 renal transplant recipients (OKT - 1160, RKT-105) performed over a period of 5 years for graft dysfunction due to ureteric complications. All grafts were laparoscopically harvested from live donors. Ureteric anastomosis in the recipient was performed using modified Lisch Gregoir technique over a DJ stent. **Results:** The incidence of ureteric complication was 0.79% (10/1265). One patient (0.95%) in the RKT group developed graft hydronephrosis. All patients presented with graft dysfunction with serially rising creatinine (mean S.Creatinine of 4.4 [1.6-11 mg/dl] and graft hydronephrosis. The initial management of all these patient was by PCN followed by ante grade stenting. The cause of hydronephrosis was stricture in 7 patients, post biopsy hematuria with clots in 2 and urine leak in one patient. One patient underwent endoscopic dilatation, 2 patients were treated with uretero pyelostomy, ureteroureterostomy in one and Rendezvous procedure

in one patient. Patients with post biopsy hematuria responded to PCN and cystoscopic clot evacuation. One patient with urine leak was managed by PCN/stenting and external drainage. All the patients had improved and stable graft function (mean s. creat 2.2) at one year. Conclusion: Ureteric complications if detected early and treated appropriately do not have a negative impact on patient or graft survival.

POD 22 – 03

Graft survival and complications of living donor pediatric renal transplant: A tertiary center experience

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Introduction: Transplantation is the preferred method of treatment for end-stage renal disease in children. Besides providing superior quality of life, it is economical in the long term compared to the continuous ambulatory peritoneal dialysis (CAPD) and maintenance hemodialysis (HD), which is difficult in children. We share our experience in renal transplantation in children. This retrospective study is an attempt to analyze the results and complications of pediatric renal transplantation at our center. **Materials and Methods:** Patients below the age of 18 years who underwent renal transplantation between 2003 and 2014 were reviewed retrospectively. Variables analyzed were etiology of ESRD, pre-transplant renal replacement modality, donor relationship, surgical complications, rejection episodes, immunosuppression regimens, graft survival and overall survival. **Results:** 36 patients underwent live related renal transplant between 2003 and 2014. The mean age was 15 years (range 10-18 years). The cohort consisted of 20 (55%) females and 16 male (45%) recipients. The etiology of ESRD was chronic glomerulonephritis (n = 20), chronic interstitial nephritis (n = 12) and unknown in 4 patients. 34 patients were on maintenance hemodialysis, 1 on peritoneal dialysis and 1 had pre-emptive transplant. All patients received grafts from their first-degree relatives. Parents were the donors for 35 patients, with mothers and fathers being the donor in 29 and 6 cases respectively. Grandmother was the donor for 1 patient. We had 4 cases with acute rejection that were managed as per protocol. There was one case of renal vein thrombosis for which graft nephrectomy had to be done. Overall we had 4 graft loss with graft nephrectomy being done for 2 of these patients. Graft survival at the end of 1 year, 3 year and 5 year graft survival was 90.9% and 86.2% and 78% respectively. **Conclusion:** Chronic glomerulonephritis was the most common etiology of renal failure in our study. The graft survival rates are comparable to those from other centers in India, however, 5-year graft survival is inferior to that of developed countries.

POD 22 – 04

Study of the out come of renal transplants with single verses multiple renal arteries in obese recipients

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Introduction: As we all know that donor nephrectomy of multiple renal arteries is not a contraindication either by open or laparoscopically. But the effect on the recipients, is a study still going on and that's to in obese patients is very less studied. Here we have made an attempt to study the outcome of single verses multiple renal arteries and in obese patients. Graft survival, vascular and urological complications were studied and compared among the single verses multiple renal artery recipients and in obese and non obese patients. **Methods:** Retrospectively analyzed all the transplants done in the department of urology, Care hospital during the period of 2004 to 2015. All the patients under went renal transplant as per hospital protocol. **Results:** Over all 320 transplants were done, 224 were single renal artery and 96 were multiple arteries. 286 had BMI <30 and 34 patients had BMI >30. Delayed graft function seen in 20 (6.25%), vascular complications in 10 (3.12%), urological complications in 15 (4.6%), wound infection in 20 (6.25%) and lymphocele in 16 (5%) were observed. Between single and multiple renal arteries, cold ischemia time, delayed graft function, vascular complications and one year graft survival were suggestive of better results in single renal artery group. Compared to obese and non obese single artery group, non obese group had better graft survival and lesser vascular complications. In multiple

renal arties also obese with multiple vessel anastomosis had poor graft survival and increased vascular complications. **Conclusion:** Even though obesity is not a contraindication for renal transplant surgery, we need to be conscious while selecting patients with multiple renal arteries for obese recipients.

POD 22 – 05

Post transplantation surgical complications in renal transplant recipient patients: An institution based prospective study

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Kidney Transplant remains one of the pioneer branches of solid organ transplant worldwide.¹ With refinement of surgical techniques especially vascular anastomosis principles the incidence of surgical complications remains low. Also with introduction of modern Immunosuppressant protocol the incidence of acute graft rejection has come down to less than 1%. So Surgical complications still remain one of the most important post transplant complications in both early and late period. **Aim and Objectives:** (1) To know incidence of various post renal transplant surgical complications. (2) To analyse any predisposing factors for the surgical complications. (3) To analyse various management principles of the surgical complications. (4) Graft as well as patient outcomes of these patients at 1 year. **Materials and Methods:** A total 109 patients were included in this study. These comprised of both live related and cadaveric organ donor cases that were performed in a two year study period from January 2011-December 2012. Donor characteristics, including number of renal arteries were noted. Post renal transplant surgical complications including arterial, venous, ureteric, lymphocele, wound infection were studied. **Results:** we had arterial (3.66%) stenosis in 3, arterial thrombosis in 1 patient. Venous thrombosis (0.91%) in 1 patient. 4 ureteric (3.66%) complications, and 5 wound infections (4.58%) and intracranial haemorrhage (0.91%) in 1 pa were recorded. **Conclusion:** Surgical Complication rates were noted to be higher in deceased donor transplant group compared to live related cases. Early diagnosis and effective management of surgical complications were associated with both better Graft and patient survival after one year of follow-up in this study.

POD 22 – 06

Early surgical complications following 210 renal transplantations: A single center study

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Introduction and Objective: The purpose of this study was to document a retrospective analysis of early surgical complications (SC) occurring within 10 months following renal transplantation. **Methods:** We retrospectively analyzed surgical complications among 210 renal transplantations performed from May 2000 to March 2015. All patients were followed at our department for 10 months. We divided surgical complications into vascular, urologic, lymphatic, wound related or other types. All patients underwent a USG with color Doppler flow study at 1st, 3rd, 7th, 14th and 21st day as per institutional protocol. After this period, when complications were suspected imaging study was performed. **Results:** Surgical complications occurred in 44 patients (20.95%). The most common vascular complication was Transplant Related Renal Artery Stenosis seen in 6 patients and all underwent PTA and stenting. The next most common complication was DVT seen in 6 patients. Renal artery thrombosis in 3 and Graft infarction was seen in 2 patients who underwent graft nephrectomy for the same. Renal vein thrombosis was seen in one patient who underwent thrombectomy. Among the urological complications, ureteral stricture was the most common followed by urinary leak. There were 12 cases of symptomatic lymphocele with alterations in graft function. **Conclusions:** Surgical complications among our series of 210 renal transplants were within the range of other series. TRAS, Renal artery thrombosis & Graft infarction were more in Internal iliac end to end anastomosis. DVT was more among females. Wound related complications were more among elderly patients

Podium Session 23: RECONSTRUCTIVE UROLOGY AND STRICTURE URETHRA – 2

POD 23 – 01

Does site of buccal mucosa graft for bulbar urethra stricture affect outcome? A comparative analysis of ventral, dorso-lateral and dorsal buccal mucosa graft substitution urethroplasty

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Introduction: BMG substitution urethroplasty is standard practice for non traumatic bulbar urethral stricture. We have assessed the outcomes of the 3 popular variations of BMG substitution urethroplasty and analysed the outcomes. **Objective:** To evaluate long term outcome of BMG substitution urethroplasty for long segment bulbar urethral stricture done by placing the graft ventrally, dorso-laterally and dorsally. **Methods:** We conducted a single institution retrospective study of 112 cases of BMG substitution urethroplasty for non traumatic bulbar urethral stricture operated between 2005 to 2014. The cases were divided into 3 groups based on the site of placement of BMG graft i.e. (a) Ventrally (n = 44) (b) dorso-laterally (n = 48) (c) Dorsally (n = 20) Follow-up period was from 1 year to 5 years. Outcome was considered a failure if repeat instrumentation was required. Patients with failure underwent urethroscopy to note the site of stricture i.e. (a) Proximal anastomotic site (b) Pan graft area (c) Distal anastomotic site Chi square test was used to compare the outcomes. **Results:** Out of 112 cases 91 (81%) were successful and 21 (19%) failed. The Success rate for dorsal BMG substitution was 70%, for dorso-lateral BMG substitution was 79% and for ventral BMG substitution was 89% (p = 0.18) Among the 21 failed cases, 12 cases (57%) had stricture at proximal anastomotic site, 4 cases (19%) in pan graft and distal anastomotic site in 5 cases (23%) (p = 0.01). **Conclusion:** The overall success rate for BMG substitution urethroplasty is better with ventral substitution though statistical significance was not found between the various modalities. This can be attributed to the fact that the maximum site for failure is proximal anastomotic site which is more accessible by ventral onlay compared to other two modalities.

POD 23 – 02

Role of direct visual internal urethrotomy in the management of urethral strictures

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Introduction and Objective: DVIU followed by intermittent self-dilatation (ISD) is the most commonly performed intervention for urethral stricture disease. However, its efficacy is still controversial. We herein evaluate the efficacy of DVIU for male urethral stricture. **Methods:** A retrospective study of 126 men who underwent DVIU from 1st January 2013 to 30th May 2015. **Results:** Most common age group was 61-70 (26.1%) years. 25.39% patients presented with acute retention. 73.01% patients presented with LUTS out of which 60.86% patients had positive urine cultures. E. coli was the most common pathogen. Most common etiology was previous surgery in 68 (53.90%) patients followed by iatrogenic injury in 23 (18.25%). Radiologically, bulbar urethra was affected in 46.73% followed by BMJ in 28.26% patients. Stricture length was <1 cm in 60.87% patients and 1-2 cm in 19.56%. Intraoperative findings corroborated well with the RGU findings regarding length and site of stricture. 72.22% patients had dense fibrous strictures and <6 Fr caliber in 36.50% patients. Self dilatation was advised in 76.98% patients out of which 74.22% were compliant. Follow up was between 15 days to 7 years. 17 patients did not come for follow up. Repeat VIU was done in 12 patients who were non compliant for self dilatation and who had a long and dense fibrous stricture segment. **Conclusion:** Urethrotomy is successful in management of male urethral strictures if applied judiciously and should not be performed for long and recurrent urethral stricture. ISD, when used on a daily or twice daily basis may delay the onset of stricture recurrence.

POD 23 – 03

Our experience with exstrophy-epispadias complex presented in adolescent and adulthood

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Objectives: To study the presentation, management and outcome of patient with exstrophy – epispadias complex presented in adolescent and adulthood. **Materials and Methods:** A retrospective review of our medical records of patients with exstrophy-epispadias complex managed from January 2010 to June 2015 was undertaken. Patients aged >10 years at presentation, with detailed medical records were selected. All patients who do not receive any surgical treatment in childhood were included. **Results:** Eight patients with classical exstrophy-epispadias complex treated in our institute in this 5 years. Among them 7 were male and one was female. None of them underwent cystectomy. Preoperatively biopsy was taken from urinary bladder plate. All of them underwent urinary bladder augmentation in form of ileocystoplasty, bladder neck reconstruction in form of para-urethral tissue closure along with wedge of symphysis bone and repair of epispadias in single stage. In one patient epispadias repair was not done. All patients are continent. One patient is waiting for epispadias repair. One patient has urethra-cutaneous fistula at base of penis. Patients are on self-clean intermittent catheterization. Patients are doing well socially and psychologically. **Conclusion:** Though exstrophy-epispadias in adolescent and adulthood is rare presentation but with modified surgical technique, result is very good and improves patients social and psychological well being.

POD 23 – 04

Quality of life assessment in patients of urethral stricture on CIC: A single centre study

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Introduction and Objective: Male urethral disease continues to be a common and often challenging condition. Direct visual internal urethrotomy (DVIU) and urethral dilatations are the most commonly performed procedures, as these appealing both for urologist and patient. The concept of clean intermittent catheterization following DVIU took shape in order to decrease recurrence. Many studies have been carried out looking at different aspects of clean intermittent catheterization (CIC). To our knowledge the quality of life in patients of urethral stricture who were on CIC was not systematically evaluated. **Objective of the study is to assess the quality of life in patients of urethral stricture who are on clean intermittent catheterization.** **Materials and Methods:** Prospective study from Jan 2014-June 2015 conducted in the Dept. of Urology. Inclusion criteria were patients of urethral stricture of age 18 yrs or above who are on CIC following DVIU. Exclusion criteria were non compliance, concomitant neurogenic voiding dysfunction and with co-morbidities. We constructed and distributed a visual analog questionnaire to evaluate quality of life of urethral stricture patients treated with DVIU who are on clean intermittent catheterization. We followed the CIC regimen as our institutional protocol. **Results:** Overall quality of life in patients with stricture urethra was moderate (defined as b/w 4-6 on CIC questionnaire). Younger age correlated with poor quality of life in a statistically significant manner. **Conclusion:** Patients with urethral stricture who are on clean intermittent catheterization rate difficulty and pain as moderate and inconvenience as low, but report moderate quality of life.

POD 23 – 05

Percutaneous nephrostomy improves split renal function in young adult patients (age ≤40 years) with severe hydronephrosis due to ureteropelvic junction obstruction: Our experience in 30 patients

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Introduction: The ureteropelvic junction obstruction (UPJO) is common cause of hydronephrosis impairing renal function and eventually leading to renal parenchymal atrophy. Split renal function measured by the diuretic renal scan is being commonly used for the assessment, prognosis and follow-up of these patients. Treatment of poorly functioning kidney (renal split function ≥10%) due to UPJO remains controversial due to

inaccurate prediction of renal function recoverability. Since, the first description of percutaneous nephrostomy (PCN) as an emergency procedure to relieve urinary obstruction by Godwin et al., its use has further expanded. It is an easy, safe and straight forward procedure done under local anaesthesia to determine recoverability of renal function in the obstructed kidney. It has been shown by various authors that even most poorly functioning kidney on renal scan due to UPJO may be improved from attempted PCN. Thus, all such kidney should not be removed without giving a chance to by attempted PCN. We report PCN drainage performed in thirty such young adult patients. Aim and Objective: We evaluated the role of percutaneous nephrostomy in young adult patients with severe hydronephrosis due to ureteropelvic junction obstruction and less than 10% split renal function on nuclear scan. Materials and Methods: In this prospective study carried out at our institute between year 2012 to 2014, a total of thirty patients (n = 30) underwent ultrasonography guide percutaneous nephrostomy under local anaesthesia and under oral antibiotic cover for unilateral hydronephrosis due to ureteropelvic junction obstruction (UPJO) with split renal function (SRF) of less than 10%. Young adult patients aged between 18-40 years were included in the study. Percutaneous nephrostomy performed for such patients remained in situ for standard 3-6 weeks period and the patients were asked to make a daily note of total PCN output. All patients underwent repeat ultrasonography of kidney (USG-KUB) and nuclear scan before undergoing surgery. If there was a significant improvement in the split renal function (10% or more) and drainage (≥ 400 ml/day) on affected side, then the patient underwent a standard pyeloplasty and those who did not improved underwent simple nephrectomy. Following pyeloplasty, all patients were followed by physical examination, nuclear scan, ultrasonography and CT-Urography at 3, 6, 12 months. Laboratory tests done during each follow-up included blood urea, serum electrolyte, serum creatinine, urine analysis and culture. Results: Out of 30 patients, 18 (60%) showed a significant improvement after percutaneous nephrostomy drainage with urine output of more than 400 ml/day or split renal function greater than 10%. A standard pyeloplasty was performed in all the patients with improved renal function. About 12 (40%) patients did not show any improvement and thus they underwent a simple nephrectomy. At mean follow-up of 12 months (range: 6 to 24 months), out of 18 patients, none showed signs of urinary tract infection or hypertension. Conclusion: To conclude, the split renal function detected by nuclear-scan may not accurately predict the recoverability of poorly functioning kidney caused by UPJO, especially when patients are young adult. Initially, one should observe the recoverability of severely hydronephrotic kidney caused by UPJO by percutaneous nephrostomy drainage and then preserving a selective kidney by performing standard pyeloplasty may be an ideal method in the treatment of poorly functioning kidney caused by UPJO.

POD 23 – 06

Comprehensive analysis of 8 years of single centre experience in hypospadias repair: Answering the dilemma, single stage or staged repair?

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Purpose: To compare the treatment outcome between different techniques of single stage and two stage repair. Materials and Methods: We retrospectively reviewed the records of all patients which underwent hypospadias repair between Apr 2007-March 2015. We compared different techniques of single stage and two stage repair of hypospadias at tertiary care teaching institute. Cosmetic results were compared by following up patients every 6 monthly. Results: A total of 85 patients were included in this study. Of 50 patients who underwent single stage repair case distribution was perineal 1, penoscrotal 2, proximal penile 9, midpenile 7, distal penile 17, coronal 13, glandular 1. Repairs performed were 13 Snodgrass, 19 Asopa's repair, 2 Duckett's, 2 Byar's flap, 2 Dartos flap, 4 snodgraft and 8 patients underwent MAGPI. Of these 12 patients developed fistula, 1 meatal stenosis and 2 dehiscence. Of the 35 patients which underwent two staged repair case distribution was perineal 4, penoscrotal 12, proximal penile 3, midpenile 6, distal penile 7, coronal 3. All of patients underwent Bracka's repair or with placement of inner prepuce graft, post auricular graft, buccal mucosal graft in order of preference and Byar's flap. Complications were fistula formation in 8 patients and stricture in 2 patients one patient

had poor graft uptake of inner prepuce graft. None of the patient had developed donor site complications. Conclusion: Single stage repair should be the preferred method for hypospadias repair as patient has to undergo less number of surgeries with comparable success rate as staged repair and better cosmetic outcomes.

Podium Session 24: RECONSTRUCTIVE UROLOGY AND STRICTURE URETHRA - 3

POD 24 – 01

"M Plasty" for correction of penoscrotal transposition: An innovative technique

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Introduction: Penoscrotal transposition is a rare anomaly of the external genitalia. They can be classified as complete or incomplete based on degrees of positional exchanges between the penis and the scrotum. Both forms are known to be associated with hypospadias and multiple surgeries are required for complete correction. Most surgeries performed for the correction of penoscrotal transposition involve making a complete circular incision around the root of the scrotum, which often results in massive penile lymphedema and often delays the correction of hypospadias. M Plasty technique can prevent the incidence of lymphedema by preserving the dorsal penile skin. Objective To evaluate the effectiveness of M Plasty for the correction of penoscrotal transposition Materials and Methods: 5 patients underwent M Plasty for incomplete penoscrotal transposition. A "M" shaped incision was made at the base of the scrotum, the scrotal halves were dissected and brought down posterior and caudal to the penis and sutured primarily. Results: All patients showed excellent cosmetic results. There was minimal postoperative edema with no vascular compromise to penile or scrotal skin. Conclusion: M Plasty is an excellent technique for the correction of penoscrotal transposition. The low incidence of penile lymphedema could be attributed to the preservation of the dorsal penile skin. This procedure provides an excellent cosmetic appearance and also allows for early correction of hypospadias.

POD 24 – 02

Factors predicting success in hypospadias repair using preputial flap with limited pedicle mobilization (Asopa procedure)

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Objectives: To analyze the objective factors determining success in hypospadias repair by Asopa technique of limited preputial pedicle mobilization. Methods: This was a prospective study involving 69 patients who underwent hypospadias repair in tertiary care teaching institution from Jan 2003 to March 2014, with follow-up of 12-114 months. Patient inclusion criteria were absence of previous local surgery, urethral plate less than 6 mm, hooded prepuce. In all patients transverse island prepuce flap with limited pedicle mobilization done (either ventral onlay flap or tube repair). Complications defined as requiring another corrective surgical procedure and included urethrocutaneous fistula, meatal stenosis, glans dehiscence. Results: Total 69 patients underwent hypospadias repair, 32 of distal and 37 of proximal hypospadias. Ventral onlay repair was done in 57 patients and tube repair in 12 patients. At median follow-up of 48 months, overall complication and fistula rates were 24.63% and 18.84%. Overall complication and fistula rates were 41.66% and 33.33% with tube repairs vs. 21.05% and 15.78% with onlay repairs. Overall complications in distal and proximal hypospadias repair were 17.85% and 24.13% respectively. In patients with conical glans 33.33% had complications v/s 16.66% in splayed glans patients. Patients aged 1-3, 4-13, 14-19 years had complications in 21.42%, 22.58%, 40% patients. Conclusions: In patients unsuitable for Snodgrass repair, Asopa technique of transverse preputial flap repair provides reasonably good results. Patients with proximal hypospadias, conical glans configuration, tube repairs, more advanced age had higher complication rates with Asopa repair.

POD 24 – 03**Dorsolateral onlay buccal mucosal graft urethroplasty by unilateral urethral mobilization versus standard dorsal onlay graft urethroplasty for anterior urethral strictures****Prakash G, Singh BP, Sankhwar SN, Dalela D, Goel A, Kumar M**
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Introduction: For dorsal onlay graft placement, unilateral urethral mobilization is less invasive than standard circumferential urethral mobilization. Apart from success in terms of patency of urethra, other issues like - sexual function, overall quality of life and patient satisfaction remain important issues while comparing outcomes of urethroplasty. Aim of present study was to prospectively compare the objective as well as subjective outcomes of these two approaches. **Materials and Methods:** Between September 2011 and July 2015, 110 adult males having anterior urethral stricture with urethral lumen ≥ 6 Fr. were prospectively assigned between two groups by alternate randomization. Operative time, complications, success rate (no obstructive symptoms, no need of any postoperative intervention, $Q_{max} > 15$ ml/sec), patient reported outcomes (using PROM USS questionnaire) and sexual functions (using Brief Male Sexual Function Inventory) were compared. **Results:** Baseline parameters were similar in both groups. Overall success rate was similar at mean follow up of 18 months in both groups. Improvement in total LUTS scores was similar in groups. Changes in overall health status (VAS and EQ-5D) was equal in both groups. Patient satisfaction rate was 70% and 80% in DO and DL group respectively. Erectile function score was significantly more ($p = 0.035$) decreased in DO than DL group while ejaculatory function and sexual desire remained stable after urethroplasty in both groups. **Conclusions:** Both dorsal and dorsolateral onlay urethroplasty provide equal success rate and patient satisfaction rate. Erectile function is better preserved with unilateral urethral mobilization as compared to circumferential urethral mobilization.

POD 24 – 04**AIR in urethrography: Assessment of its role in comparison to conventional retrograde urethrogram for diagnosis and follow up of urethral pathologies****Sankhwar SN, Dalela D, Gupta S**

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Introduction and Objectives: The retrograde urethrogram (RGU) has been used for more than a hundred years and despite the advent of other imaging modalities is still essential for the diagnosis and staging of anterior urethral stricture. In order to detect early recurrence after OIU (optical internal urethrotomy) or urethroplasties, a strict follow up protocol is often required but these investigations are cumbersome, invasive and costly. Air is a convenient, inexpensive and proven diagnostic tool. We describe the use of air to outline urethral mucosal pathology and try to compare its effectiveness with conventional retrograde urethrograms. **Materials and Methods:** Total 60 patients presenting with obstructive lower urinary tract symptoms and having uroflowmetry suggestive of stricture pattern were studied in three arms. Pneumo-urethrogram (air as contrast media) was done in 20 follow up cases of optical internal urethrotomy to evaluate its feasibility as follow up tool for anterior urethral stricture disease and double contrast urethrogram (retrograde urethrogram with a prefilled syringe consisting of 2 ml urografin 76% and 18 ml of room air) was done in 20 cases of suspected urethral stricture as a primary diagnostic tool. These patients were compared to 20 patients undergoing conventional RGU both after OIU and as primary investigation in naive patients of stricture urethra. **Results:** There was no incidence of clinical air embolism or UTI in pneumourethrogram and double contrast urethrogram group but 10% patients undergoing conventional RGU experienced UTI. None of the patient complaint of bleeding per urethra and mild urethral irritation for few hours post procedure was reported in patients undergoing double contrast urethrography and even more in conventional RGU. Also double contrast urethrogram helped better visualisation of Littre's glands, dilated Cowper's duct and mucosal irregularity proximal to urethral stricture. **Conclusions:** Pneumourethrogram is a cost-effective and feasible option for follow up of anterior urethral stricture disease and double contrast urethrography can help to visualise mucosal pathologies and may avoid urethroscopy in certain conditions.

POD 24 – 05**Topical Tacrolimus: Role in the medical management of BXO diseases****Saurabh Joshi, Kumar Rajesh Ranjan, Gururaj P, Jayaprakash G, Ravishankar THS, Shivshankarappa M, Imdad Ali N**

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Introduction: Balanitis xerotica obliterans (BXO) is a well-known chronic disease affecting male genitalia. BXO is a chronic, lymphocyte-mediated skin disease causing glandular urethral stricture of unknown origin. It is the male variant of lichen sclerosus et atrophicus. Exact incidence of the disease is obscure; there are several surgical and nonsurgical treatment options available. Among the nonsurgical management, the use of tacrolimus (immunomodulator) ointment is being considered. **Methodology:** This study was performed at our institution among the patients attending the outpatient department with typical clinical features of BXO during the year 2015. Sixteen cases were studied and patients were treated with topical tacrolimus for a period of 8 weeks. **Results and Discussion:** The topical application of tacrolimus (0.03 to 0.1%) appears promising in early lesions, as seen in this study by the symptomatic relief and increase in urinary flow rates. The need for dilatation had also decreased. However, further studies, are needed to know the exact dosage schedule, adverse effects, contraindications, etc., of topical tacrolimus usage in BXO diseases.

POD 24 – 06**"Real-time Sonoelastography" in male anterior urethral strictures: A novel technique for assessment of Spongiofibrosis****Shyam Talreja, Yadav SS, Agarwal N, Vyas N, Priyadarshi S, Tomar V**

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Introduction: Spongiofibrosis assessment is critically important in evaluation of anterior urethral strictures as its severity is directly proportional to stricture recurrence and thus affects management. RUG is ineffective in evaluation of spongiofibrosis. SUG delineates it but does not accurately estimate its depth/vertical extent. RTE, a newer technique not only attempts at qualitative but also quantitative estimation of spongiofibrosis (tissue stiffness) which results due to underlying pathological process. This study was undertaken to study various elastographic patterns and strain ratios in anterior urethral stricture patients and compare them to operative and histopathological findings. **Materials and Methods:** Sixty-three RGU diagnosed anterior urethral stricture cases were taken and re-evaluated by SUG and SE by another radiologist who was blinded to the findings of RGU. Strain patterns and ratios of spongiofibrotic segments were documented and compared with operative findings as gold standard. **Results:** Blue pattern on RTE showed 100% concordance with severe fibrosis as evaluated against gold standard whereas green pattern showed 87.5% concordance with moderate degree of fibrosis. Mean strain ratio was significantly higher in severe degree of fibrosis (10.51 ± 2.297) as compared to moderate degree (6.33 ± 2.353) when compared on histopathology ($p < 0.001$). **Conclusion:** Real time sonoelastography is superior to SUG in evaluation of spongiofibrosis as it not only accesses qualitatively but also quantifies the same. Strain ratios are statistically better indicators for estimation of spongiofibrosis.

Podium Session 25: RECONSTRUCTIVE UROLOGY AND STRICTURE URETHRA – 4**POD 25 – 01****Role of two stage (Johanson) urethroplasty in modern Indian prospective and its impact on sexual function in comparison to single stage urethroplasty: A single center experience****Singh KJ, Sankhwar SN, Gupta S, Garg Y, Kumar M, Singh BP, Gupta A**

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Introduction and Objectives: Anterior urethral strictures are commonly encountered in urological practise for which multiple treatment options are available. Panurethral strictures pose a great challenge to the urologist. Nowadays there has been a shift towards single stage repair using free grafts, pedicle-based flaps or combined approaches. We wish to highlight that still there are many occasions, especially in countries like India where two stage urethroplasty still has an important role to play and is often the only option of treatment. Also we would try to study the impact of urethral stricture and urethroplasty on erectile function, with special focus on johansson repair. **Materials and Methods:** We retrospectively analysed the prospectively maintained data of anterior urethral stricture patients undergoing urethroplasty at department of urology, in time period 2011-2014. Total 129 patients were studied. 76 patients underwent single stage urethroplasty with buccal mucosal graft urethroplasty being most common and 53 patients were taken up for two stage johanson repair with second stage performed after a period of at least 3 months and patients were followed up at 3 months and 6 months postoperatively. **Results:** Johanson repair was done for pananterior urethral strictures with mean length 8.25 cm while single stage repair strictures had mean length of 5.7 cm. Overall complication rate was almost similar in both type of repairs with recurrence of stricture more common in two stage repair and fistula and diverticulum were reported more often in single stage urethroplasty. Single stage repair had higher overall success rate (86%) than johanson repair (70%). Erectile function was poor in lay open group compared to single stage repair and majority of patients did show improvement in erectile function status. **Conclusion:** Although western world prefers single stage urethroplasty but in developing countries like India, where we still encounter lengthy pan-anterior strictures, there still exists a place for two stage urethroplasty considering the poor oral health status of the people.

POD 25 – 02

Is young Dees a good option for urinary incontinence following anastomotic urethroplasty for PFUDD?

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Introduction: Urinary incontinence is an uncommon but very distressing sequel of successful anastomotic urethroplasty. Treatment is challenging. Young Dees bladder neck reconstruction (BNR) though commonly used in women following bladder neck and urethral injuries are not reported in men. We review our experience. **Materials and Methods:** Between 2009 to 2014, 89 urethroplasties were done in our institution. Of which seven had genuine stress incontinence. Six had Young Dees bladder neck reconstruction. We reviewed the charts of these six patients and analysed age, type of pelvic fracture, etiology of incontinence, time to continent procedure were noted. Special emphasis on post operative outcome, need for medical treatment, need of CIC, and use of pads were studied. Patients with minimum six months of follow up were included. **Results:** Between 2009 to 2015, 89 had urethroplasty for PFUDD. Four had urinary incontinence, two who had urethroplasty elsewhere but had Young Dees in our hospital were included. Median age was 23 yrs (range 14-31). Of six, four had single stage, one had redo and one underwent procedures. Median time to definitive procedure was 11 months (range 9-48 months). BNR was done over 14 fr Foley in 4 & 12 fr in 2. None required ureteric re-implant. All of them are voiding via naturalis without need for CIC. Severity of injury, VCUG findings, type of surgical procedure did not predict onset of urinary leak following urethroplasty. **Conclusion:** Young Dees BNR is a good option for urinary incontinence following urethroplasty for PFUDD. It is cost effective with minimal morbidity.

POD 25 – 03

Indwelling catheter-induced urethral erosion: A preventable and curable urethral injury

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Introduction: Indwelling urethral catheter associated urethral erosion is a rare complication. There are less than fifty cases reported on catheter

related urethral erosion. We report three cases with brief review of literature. **Materials and Methods:** Case 1: Fifty-five year male, known case of cauda equina syndrome and coronary artery disease, presented with eroded urethra ventrolaterally till penoscrotal junction with 120 degrees anticlockwise penile torque. Pressure flow studies showed hypotonic bladder. Six weeks later, definitive reconstruction was done. Presently, patient is on clean intermittent catheterisation and doing well. Case 2: A sixty-five year, known diabetic and hypertensive, was catheterized following cerebrovascular accident. Four months later came with urethral erosion till proximal penile shaft with 90 degrees clockwise torsion of penis. Patient is awaiting reconstruction. Case 3: A forty-five year cervical cord injured paraplegic patient, on perurethral catheter for 6 years, had urethral erosion till penoscrotal junction with 150 degrees anticlockwise penile torque. He has been put on suprapubic diversion. **Discussion:** Patients with neurological and/or vascular diseases are at high risk of catheter related urethral erosion. Penile torque with improper securement of catheter is associated with erosion of urethra on poorly supported right or left ventrolateral aspect of penis. When feasible, this should be repaired. In our case, patient have good functional and cosmetic outcome. **Conclusion:** The keys to prevent this complication are proper catheter securement, education of patients and their attendants, identification of patients at risk. Patients requiring catheterisation for more than a week should be best put on suprapubic diversion.

POD 25 – 04

The correlation between microvascular density of prepuce and severity of hypospadias: A prospective clinical study

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Introduction: Hypospadias is one of the most common congenital anomalies, occurring in about 1 of 250 newborn. Various surgical techniques have been described for hypospadias repair according to severity of hypospadias. In most cases urethral plate is used, but if urethral plate is not wide enough, then prepuce is used to create neourethra. The blood supply of the hypospadiac prepuce is crucial for success in surgery. CD31 is a Panendothelial cell antigen which is used to assess the microvascular density (MVD) of tissue. **Methods:** A total of 60 children were included in the study. The hypospadias group consisted of 50 children undergoing hypospadias repair, and the control group consisted of 10 age-matched healthy children undergoing circumcision. Microvessel density of prepuce was measured by immunostaining with an antibody against CD31 (Panendothelial cell antigen). The measured microvessel density was correlated with severity of Hypospadias and statistical analyses were carried out to find correlation. **Results:** The microvessel density of prepuce was found to be significantly less in the hypospadias patients compared with normal healthy children ($p < 0.05$), also the MVD decreased significantly with the severity of Hypospadias ($p < 0.05$). **Conclusion:** The decreased MVD suggest a defective vascular pattern of hypospadiac prepuce and as the severity of hypospadias increases from distal to proximal the MVD further decreases. These results suggests that the arterial supply of hypospadiac prepuce is different from normal and this may have an impact on the surgical outcome, where the preputial island flaps are used for the urethral reconstruction.

POD 25 – 05

Long term outcomes of dorsal onlay oral mucosal urethroplasty for anterior urethral stricture disease

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Introduction: Oral mucosal graft has become increasingly popular and effective treatment for urethral stricture disease. Outcomes generally concentrate on voiding. Our study emphasis on longterm outcomes after dorsal onlay urethroplasty for anterior urethral stricture disease. **Materials and Methods:** From January 2009 to December 2013 a total of 186 patients underwent dorsal onlay OMG performed at our institute. The average

age was years 43 yrs (range 15-75). Patients with pelvic trauma and those not sexually active preoperatively were excluded from analysis. Data is entered in File maker pro 12. Early complications were noted and long term complications data were collected in the office setting or by telephone interviews. Results: The mean (range) age of the men was 43 (15-75) years. 31 patients (16.6%) had early complications, local wound infections in 6, scrotal ecchymosis in 2, 1 had urethrocutaneous fistula, penile edema in 4, post operative clot retention in one patient and UTI in 5 patients. All patients are under regular follow up as per protocol with the mean (range) follow-up of 42.3 (12-70) months. Erectile dysfunction reported in 22.6% and nearly half of the patients had improvement over 6 months after surgery. Post-void dribbling is seen in 30.66% and Recurrence of stricture in 18.8%. Conclusion: Long term follow is essential as the recurrence rate increases with time. Apart from urethral patency it is also essential to look into continence, erectile function, post void dribbling and patient satisfaction in general.

POD 25 – 06

Ureteropelvic junction obstruction: midterm outcomes of pyeloplasty in very poorly functioning kidneys

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Introduction: Ureteropelvic junction obstruction (UPJO) may present in adulthood with significantly compromised ipsilateral renal function. Management of UPJO if ipsilateral renal function is <20% or eGFR is <20 ml/min is controversial and nephrectomy is a feasible option. **Patients and Methods:** We retrospectively analysed patients who underwent pyeloplasty in kidneys with preoperative differential function between 10 to 30% over a period of 5 and half years (Jan 2010 to July 2015). The data was further scrutinised and divided into Group A - <21% differential function and Group B - <21 ml/min eGFR of the affected kidney to analyse functional outcomes based on preoperative renal function. **Perioperative complications and postoperative outcomes** in terms of functional recovery, persistent pain and drainage and function on follow up were recorded. **Results:** Out of a total of 63 patients included in this study, 18 patients had renal function <21% and 29 patients had <21 ml/min eGFR of the affected renal unit. Overall success rate (defined as non-obstructive pattern, no deterioration in differential function and no persistent symptoms) was about 90%. About 37% patients had significant improvement in renal function and all except 1 in each group showed no further deterioration over a period of about 27 months of mean follow up. None required re-intervention for obstructive drainage or pain. **Conclusion:** Pyeloplasty in poorly functioning renal units is feasible option in view of acceptable complication and success rates. There is a possibility of functional recovery in one third of patients and in most of the rest, there is no further deterioration.

Podium Session 26: URO-ONCOLOGY AND ADRENAL DISEASES - 5

POD 26 – 01

Operative details of ipsilateral renal preservation and follow-up in a case of adrenalectomy with IVC thrombectomy

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Introduction: Adrenocortical carcinoma (ACC) is a rare malignancy (0.5-2 cases/million/year) with poor prognosis (32-45% five year survival) due to delay in diagnosis and lack of effective adjuvant treatment. We report operative details of left side renal preserving surgery and long term follow-up in a case of adrenocortical carcinoma with tumor thrombus extending via adrenal vein into inferior vena cava. To best of our knowledge, this is the first report of renal preservation in case of adrenocortical carcinoma with IVC thrombus. **Materials and Methods:** A 55-year male, presented with incidentally detected left adrenal mass during routine checkup. Routine investigations and functional testing for adrenal mass were normal. CECT abdomen showed left enhancing adrenal mass (8 cm in size) with

tumor thrombus extending up to 5 cms in IVC via adrenal and renal vein. Whole-body scintigraphy was negative for metastasis. Open exploration and an en bloc resection of the adrenal mass, para-aortic lymph nodes and inferior vena cava thrombectomy was done. Specimen included widely excised adrenal mass, adrenal vein, distal renal vein, tumor thrombus and involved IVC wall. IVC reconfigured with prolene suture. Renal vein proximal to thrombus sutured, preserving venous drainage of left kidney via gonadal and lumbar vein. **Results:** Following surgery patient developed acute tubular necrosis secondary to intraoperative hypotension. Patient started on renal replacement therapy and supportive ICU management for a week followed by gradual return of renal function to normal. Patient is doing well, with no evidence of metastasis on PET CT at 1 year follow-up. Histopathology was consistent with poorly differentiated adrenocortical carcinoma and similar histology in tumor thrombus. All lymph nodes were negative for malignancy. **Conclusion:** Curative resection of ACC involving IVC is feasible and doesn't represent a contraindication to surgery. Kidney preserving surgery should be attempted without compromising surgical margins if possible.

POD 26 – 02

Impact of testosterone levels on the outcome of Androgen deprivation therapy in metastatic prostate cancer

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Background and Objectives: Low testosterone level is a poor prognostic factor in prostate cancer. Indians have relatively shorter time to castrate resistant prostate cancer (CRPC). This study was conducted to assess the impact of testosterone levels (total and free) on outcome of Androgen deprivation therapy (ADT) in metastatic prostate cancer. **Methods:** A prospective non randomized intervention trial was done in 62 patients with metastatic carcinoma prostate. Total and free testosterone level was assessed before the ADT, at nadir level of PSA and at the time of development of CRPC (defined as rise of PSA >5 ng/ml from nadir), which was the study end point. Time to CRPC was correlated with number of bony lesions and testosterone level before ADT. **Results:** Castrate resistant prostate cancer developed in 48% patients. The median follow up was 18 months (6-50 months) and mean duration of development of CRPC was 17.79 (SD ± 6.854) months. Mean number of metastatic lesion in CRPC and non CRPC group was 9.43 and 8.19 respectively, which was not significant (p value 0.381). Though the total testosterone levels were not significant, patients with baseline free Testosterone level i.e. <15 ng/ml had 3.4 higher chance of developing CRPC than those with ≥15 ng/ml (OR 3.5 95% CI 1.01-12.76). **Interpretation and conclusions:** Lower Free testosterone level could be an important predictor of poor outcome of ADT in metastatic carcinoma prostate in Indians. This could form the basis for an additional therapy at the time of ADT in metastatic prostate cancer. **Key words:** Castrate resistant Prostate cancer (CRPC), Metastatic prostate cancer, free testosterone, Total testosterone.

POD 26 – 03

Clinical profile and oncological outcomes of renal cell carcinoma with venous involvement: A single centre experience

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Introduction: Renal cell carcinoma (RCC) occurs at an estimated rate of 4.4-11.1/100,000 person-years and 4-10% patients have venous thrombus (VT) at diagnosis. Radical nephrectomy with tumor thrombectomy (RNTT) is the goldstandard with long term cancer-free survival of 40-65%. **Methods:** Retrospective analysis of RCC with VT operated at our institute from 2008-15. **Clinical profile, surgery, morbidity, mortality** were assessed and followed up. **AJCC, TNM classification for RCC and Mayo classification for VT** were used. **Results:** Out of 138 RN from 2008-15, 12 (8.7%) patients had VT with median (IQR) age of 57.5 (7) years, 10 were males (83.3%) and 8 (66.6%) were right-sided. Most common tumor stage was 3a. Median tumor size was 11.25 cm. According to Mayo classification of VT, 6 were Level 1 (50%), 3 Level 2 (25%), 2 Level 3 (16.6%) and Level 4 was 1 (8.3%). Median operating time was 220 (58) minutes and postoperative

hospitalization was 11.5 (4) days with no perioperative mortality. At present, 9 (66.6%) are alive, 3 died due to disease progression at mean of 5 months. Out of 3 who died 3 had metastatic disease on presentation, 2 had level 1 thrombus, 1 level 3 thrombus with significant lymphadenopathy. The median survival was 13.5 (3-72) months. All had clear cell RCC on histopathology with thrombus demonstrable. Conclusion: Lymph node metastasis, distant metastasis at presentation, and invasion of the IVC wall were independent prognostic factors for CSS in all patients. With proper preoperative planning and perioperative care RNTT prolongs survival with acceptable surgical morbidity.

POD 26 – 04

A comparative study of diagnostic accuracy for prostate cancer detection between blind transrectal biopsy versus multiparametric mri image based trus biopsy

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Introduction: PCa is the most common male malignancy and the second most common cause of male cancer-related death. Prostatic biopsy has an important role in the diagnosis of carcinoma prostate. Advances in 3-T multiparametric magnetic resonance imaging (mpMRI) have improved image-based diagnosis. Also, targeted magnetic resonance (MR)-guided biopsy (MRGB) has become an alternative approach to TRUSGB. In this study, a comparison is made between the blind transrectal biopsy and MRI image based TRUS biopsy. **Aim:** To study and compare the diagnostic accuracy for prostate cancer detection by blind transrectal biopsy and Multiparametric MRI Image based TRUS biopsy. **Materials and Methods:** (1). Study group: Patients attending Urology OPD at our Medical College Hospital in the age group of 30 to 70 with either hard, nodular prostate on digital rectal examination (DRE) or with a serum PSA value more than 4 ng/ml. (2) Methods: All the eligible patients will be subjected to Multiparametric MRI and the prostatic image is stored. The image is blinded to the person (urologist) taking blind transrectal biopsy. Blind transrectal biopsy (6-12 cores) is done by urologist. This is followed TRUS biopsy based on the MRI images, which is done by the radiologist. About 50 patients will be included for the study. The rate of prostate cancer detection is compared between the two types of biopsies. **Results:** Out of the 50 patients included in the study who fulfilled the inclusion criteria, 32 patients were confirmed as carcinoma prostate by biopsy. Out of the 32 patients, blind transrectal biopsy was positive only for 18 patients whereas MRI image based TRUS biopsy was positive for all. Moreover there was upgrading of Gleason score in the biopsies taken by MRI image based TRUS as compared to blind transrectal biopsy. The results were statistically significant ($P < 0.001$). **Conclusion:** From this study we could conclude that MRI image based TRUS biopsy was highly effective to detect and localize clinically significant prostate cancer and this was statistically significant. This study highlights a potentially useful role of MRI image based TRUS biopsies for the identification of clinically significant high-risk tumors otherwise missed by blind transrectal biopsy alone. Upgrading of Gleason score was seen in the MRI group and they also required lesser number of cores as compared to the blind transrectal biopsy.

POD 26 – 05

Relevance of neutrophil lymphocyte ratio in tumour characteristics and survival in clear cell-renal cell carcinoma

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Introduction and Objectives: Neutrophil Lymphocyte Ratio (NLR) is used to assess many different solid tumors. In Clear cell-Renal cell carcinoma (RCC), NLR is used to assess Tumor characteristics and Survival. We review our experience with relevance of elevated NLR (>2.7) in patients of Clear cell-RCC. **Methods:** Ours was a retrospective study done in the Department of Urology, from Jan 2001 to Jan 2015. One hundred and eighty six patients of Clear cell-RCC in whom we could get documented NLR were retrieved and selected for the study from Hospital based information system and follow up. Patients were subjected to Partial or Radical Nephrectomy as per the lesion characteristics. **Results:** There were 161 (86.6%) male patients and

25 (13.4%) females with the Mean age being 57 years (32-74 years). Right sided tumor was more common 103 (55.4%) than left side 82 (44.1%) with bilateral synchronous tumor seen in 1 (0.5%) patients. NLR was normal (<2.7) in 131 pts, and elevated (>2.7) in 55 pts. After evaluating elevated NLR against Tumor size, Renal vein invasion, Fuhrmans grading, Lymph node metastasis and metastasis free survival. NLR showed a significant correlation with Tumor size and Renal vein invasion (p value = 0.00) in our study. **Conclusion:** NLR in Clear cell-RCC has a correlation with the biology of the tumour. More cases and a longer follow up may be needed to evaluate its effect on metastasis free survival.

POD 26 – 06

The cell proliferation index and clinicopathological features in arsenic related bladder cancers in West Bengal: A single institute case control study

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Introduction and Objectives: Relationship between bladder cancer and arsenic is established; Indian data is scarce. Our objectives are to see whether arsenic level in serum, urine and bladder tissue are higher in carcinoma bladder patients and whether arsenic exposed bladder cancer patients are more prone to high grade, high stage tumors and more recurrences. **Methods:** Blood, urine and bladder tissue samples of consenting bladder tumor patients ($n = 54$) undergoing surgery for their disease after being staged and graded both histologically and by imaging (CT scan), were subjected to arsenic estimation; also determination of proliferation index (PCNA) was done in bladder tumor tissue by immunohistochemistry. Demographic data relating prevalence of arsenic in drinking water were obtained; other risk factors including occupational chemical exposure and smoking were noted. Patients were followed-up clinically and cystoscopically for one year. **Results:** 33 (60%) of the 54 bladder tumor patients showed higher level of arsenic in their blood, urine and tumor tissue. Patients who were having high level of arsenic in their samples had higher tumor stage and grade which is statistically significant ($p < 0.05$). These patients were mostly from arsenic endemic areas. No recurrence is seen in 1 year follow-up. The marker of cell proliferation index (PCNA) was expressed at an intermediate to high level in those patients who were from arsenic prevalent area ($p < 0.05$). **Conclusions:** Arsenic related bladder tumors are of higher pathological stage and grade. The relationship of arsenic with tumor recurrence and expression of cell proliferation index needs a study of longer follow up.

Podium Session 27: URO-ONCOLOGY AND ADRENAL DISEASES - 6

POD 27 – 01

Can prostate trucut biopsy upgrade/upstage T1a-T1b tumors?

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Introduction: Gleason score and volume of disease are major determinant diagnosing T1a and T1b carcinoma prostate. TURP resects prostatic tissue from TZ and cancers of this zone are less aggressive than PZ cancers. We aim to conduct a prospective study to evaluate whether prostatic needle biopsy (PNBx) from PZ upgrades and/or upstages the T1a and T1b tumors. **Materials and Methods:** We conducted a prospective study from July 2014 to August 2015 in our institutes. 50-70 years 127 healthy male patients with PSA <4 and normal DRE findings underwent TURP for their obstructive LUTS. 6 patients had adenocarcinoma on their biopsy report. These six patients were subjected to 10 cores PNBx after informed consent. PNBx was evaluated by the same pathologist. Histopathological parameters of both biopsy reports were compared with regard to Gleason score, volume of tissue involved, perineural invasion (PNI), intraepithelial neoplasia (PIN), extracapsular extension and ductal or neuroendocrine differentiation. **Results:** Six patients (4.7%) were incidentally diagnosed T1a and T1b tumors. All six patients had

PZ involvement with upgrading and upstaging of tumors. Patients were managed accordingly. Conclusion: We advocate PNBx in T1a and T1b cancer patients for accurate staging.

POD 27 – 02

Frozen section analysis of ureteral margin while doing radical cystectomy: Can we do away with it?

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Introduction: Intraoperative frozen section analysis (FSA) of ureteral margins has been a controversial issue. This study analyzed preoperative predictors for the need of FSA of ureteral margins while doing radical cystectomy (RC). **Methods:** In a retrospective cohort study, 262 patients who underwent RC at single center from Jan 2000 to July 2015 formed the study population. Initial 102 patients had FSA and subsequent 160 did not. Impact of clinical T stage, location i.e. trigonal growth or non trigonal growth, concomitant presence of CIS etc was assessed on margin positivity. Univariate and multivariate logistic regression analysis was done to identify independent predictors of ureteral involvement. **Results:** Tumor location (involving vesical trigone), clinical T stage (>T3) and concomitant CIS were significantly associated with ureteral involvement. Overall margin positivity rate was 5.88%. Detection rate of FSA was (2/102) 1.96%. None of the patients with positive margin had any recurrence (0/15) at the mean follow up of 7.8 (1.6–16.8) years. Of 160 patients 10 had shown dysplasia and CIS changes but none had developed local recurrence at the site of anastomosis at mean follow up of was 8.6 (2.6–15.6) years. One patient had recurrence in our study in whom ureteral margin was negative in the specimen after 1.4 years of follow-up. **Conclusion:** Frozen section analysis had a positive yield when T3 or T4 tumors are located at the trigone along with CIS changes. As positive FSA does not impact the natural course of disease, urinary diversions can safely be done without it.

POD 27 – 03

Functional outcomes of partial penectomy surgery for penile carcinoma: Our experience

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Introduction and Objectives: Partial penectomy remains the most common surgical procedure for treatment of invasive squamous cell carcinoma of penis. It provides successful local oncological control with adequate urinary and sexual function but there is no consensus in the literature regarding functional outcome after partial penectomy for penile carcinoma. **Methods:** Patients undergoing partial penectomy for penile carcinoma from Feb 2008 to June 2015 were included in our study. Patients sexual quality of life and urinary function were assessed retrospectively using International Index of Erectile Function (IIEF-15) and Patient Reported Outcome Measures (PROM) for urethral stricture surgery. **Results:** Out of 30 patients undergone partial penectomy, only 26 included in study, one died, three lost follow up. Out of 26 patients 19 patients (73.07%) reported normal erection but only 11 patients (42.30%) have sexual satisfaction whereas 7 patients (26.92%) have no sexual activity and denied feeling sexual desire. All patients report mild urinary symptoms, most common is decreased strength in 9 patients (34.61%) and require sitting posture to micturate, only 3 patients (11.58%) report metal stenosis and require dilatation. Ninety percent report being satisfied with their procedure. **Conclusion:** Our study used standardized, validated questionnaires to evaluate sexual and urinary function in partial penectomy patients. We report excellent overall urinary function and quality of life following partial penectomy for penile carcinoma and our results depict more realistic sexual outcomes than other studies.

POD 27 – 04

Retroperitoneal laparoscopic partial nephrectomy for malignant renal masses: A single centre experience

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Introduction and Objective: Retroperitoneal laparoscopic partial nephrectomy (RPLPN) is less commonly performed than transperitoneal laparoscopic partial nephrectomy for T1a & selective T1b renal masses. Objective of our study is to carry out safety & efficacy of RPLPN. **Methods:** Patients who underwent RPLPN from period 2008-14 were retrospectively analysed. Outcomes of interest included demographic data, pre-op data, perioperative and postoperative variables, surgical complications and oncological variables. **Results:** Among twenty-four patients, male to female ratio was 2:1. Patients were in age range of 25-75 years, with a mean of 49.16 years. BMI ranges from 17.84-34.25. Among renal masses, 13 were on right side, 11 were on left side. The proportions of low, intermediate & high risk score were 13 (54.17%), 9 (37.50%) and 2 (8.33%) respectively as assessed by RENAL (Radius/Exophytic/Nearness to collecting system/Anterior/Location) nephrometry score. Mean Operative time was 132.5, 90-170 minutes. Warm ischemia time (WIT) was 21.83, 15-44 minutes. Mean estimated blood loss was 106 ml, 25-300 ml. Mean Hospital stay was 5.25 days. Four patients developed complications: one needed exploration, one needed angio-embolisation, one patient converted to lap radical nephrectomy, one developed urinary leakage. Histopathology revealed 23: renal cell carcinoma & one renal leiomyoma. One patient found to have positive surgical margin which underwent open radical nephrectomy. All except one experienced disease free survival during their follow up. **Conclusion:** Overall outcomes for RPLPN is comparable to outcomes for open & transperitoneal lap partial nephrectomy mentioned in the literature & is equally safe for right & left sided lesions.

POD 27 – 05

Non urothelial bladder cancer: As single centre experience

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Introduction: Non urothelial bladder cancers (NUBC) are uncommon tumors of urinary bladder accounting for less than 5% of all bladder cancers. We report our experience of management of this rare group of patients. **Materials and Methods:** The study group included 17 patients (male-14, females-3) who were diagnosed as NUBC in the department of Urology between Jan 2012 to June 2015. Mean age of the patients were 52.5 yrs. The histological subgroup consisted of: Squamous cell-11, adenocarcinoma-2, small cell-2 and leiomyosarcoma-1. **Results:** Out of the 12 patients with squamous cell, 10 underwent radical cystectomy and urinary diversion. 2 patients were diagnosed to have adjacent organ infiltration and referred for palliative radiotherapy. The pelvic lymph nodes were positive in 5 of 12 and three of them, received adjuvant chemotherapy. In the adenocarcinoma 1 patient underwent partial cystectomy with urachal carcinoma and 1 patient had radical cystectomy due to sigmoid colon cancer infiltrating bladder. In the small cell, 1 patient had upfront surgery and other patient received neo-adjuvant chemotherapy. The leiomyosarcoma patient underwent radical cystectomy. Among Squamous cell variety, 6 are alive and on regular follow up, 3 are dead and 2 had lost to follow up. 2 patients of small cell variety expired. The adenocarcinoma and leiomyoma patients are on regular follow up. **Conclusion:** Radical surgery is best treatment option for NUBC. Neoadjuvant chemotherapy has a proven role in Small cell carcinoma subtype of NUBC. Presently there are no guidelines for adjuvant therapy in this setting.

POD 27 – 06

Comparison of operative outcomes of open, laparoscopic and robotic partial nephrectomy: A single center experience of 5 years

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Introduction: Technical advancement in imaging has increased the incidence of small renal masses. In the present era, partial nephrectomy is an established treatment modality with excellent functional and oncologic

outcomes even at long term follow up. Methods: A retrospective analysis of patients who underwent partial nephrectomy for suspicious renal mass in our department from April 2011 to August 2015 was done. Depending upon the mode of surgery (open, laparoscopic or robotic) the data was further divided into 3 groups. Operative and postoperative characters such as operative time, blood loss, clamping time, hospital stay, serum creatinine, margin status and final histology were compared between the 3 groups. Results: Seventy patients were included. The mean age of study population was 50.8 years, 53 patients were males and 40 patients had a right renal mass. Patient characteristics were comparable in all 3 groups except tumor size which is significantly larger in open partial nephrectomy group. Clamping time was significantly shorter in open surgery (11.06 ± 10.0) vs. laparoscopic or robotic surgery (23 ± 12 and 18 ± 9.7 respectively) (p value = 0.005) as was blood loss which was more in open surgery (595 ± 396) vs. for laparoscopic or robotic surgery (490 ± 397 and 370 ± 352 respectively) (p value = 0.014). Post operative hospital stay and margin positivity were similar in all 3 groups. Conclusion: Open surgery has significantly lesser operative time and lesser clamping time at cost of higher blood loss. But post operative hospital stay and margin status was similar in all three groups. Podium Session 28: URO-ONCOLOGY AND ADRENAL DISEASES - 7

POD 28 – 01

A study of prostate specific antigen derived parameters in diagnosis of adenocarcinoma prostate

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Aim: To study a study of prostate specific antigen derived parameters in diagnosis of adenocarcinoma prostate. **Materials and Methods:** Study group: Patients attending Urology OPD at our Medical College Hospital in the age group of 30 to 70 with either hard, nodular prostate on digital rectal examination (DRE) or with a serum PSA value more than 4 ng/ml. Study period is June 2014 to June 2016. The primary end point of the study was to determine the PSA, fPSA, %fPSA. The secondary end point was to evaluate the relationship between, PSA, fPSA, %fPSA and Gleason score at biopsy. **Methods:** A blood sample was drawn before any prostatic manipulations that might cause a transient increase of biomarkers. The blood samples were assayed for tPSA, fPSA, %fPSA assays. Transrectal ultrasonography (TRUS) was used to determine prostate and transition zone volume. Patients underwent ambulatory TRUS-guided prostate biopsies according to a standardized institutional saturation scheme, which consisted of at least 12 biopsy cores taken from the prostate gland. **Results:** The combined use of free and total prostate-specific antigen (PSA) in early detection of prostate cancer has been controversial. This article systematically evaluates the discriminating capacity of a large number of combination tests. **Methods:** Free and total PSA were analyzed in stored serum samples taken prior to diagnosis in 50 cases. We used a classification algorithm called logic regression to search for clinically useful tests combining total and percent free PSA and receiver operating characteristic analysis and compared these tests with those based on total and complexed PSA. The average area under the receiver operating characteristic curve across test data sets was 0.74 for total PSA and 0.76 for the combination tests. Combination tests with higher sensitivity and specificity than PSA >4.0 ng/mL were identified 29 out of 35 times. All these tests extended the PSA reflex range to below 4.0 ng/mL. Receiver operating characteristic curve analysis indicated that the overall diagnostic performance as expressed by the area under the curve did not differ significantly for the different tests. **Conclusions:** Tests combining total and percent free PSA show modest overall improvements over total PSA. However, utilization of percent free PSA below a PSA threshold of 4 ng/mL could translate into a practically important reduction in unnecessary biopsies without sacrificing cancers detected.

POD 28 – 02

Carcinosarcoma of urinary bladder: A case series

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Introduction: Sarcomatoid carcinoma or carcinosarcoma is a rare neoplasm of the urinary bladder that is defined as a biphasic tumor consisting

of malignant epithelial and mesenchymal component. Approximately 70 cases have been reported in the literature mostly as a case report or limited series. The disease appears in the seventh decade of life. The most common symptoms are macroscopic hematuria and dysuria. Generally more than 70% of cases present with advanced stage and have a worse prognosis than conventional urothelial carcinomas. In cases of bladder carcinosarcoma, evidence supporting a monoclonal origin for the epithelial and mesenchymal components was revealed using loss of heterozygosity studies with microsatellite markers, while there exists a hypothesis that multiclonal stem cells of the epithelial and mesenchymal components play a causative role. Mortality rate for carcinosarcomas is 80%, and average life expectancy following diagnosis is 14 months. **Methods:** We report a small case series of bladder carcinosarcoma who had varying presentations, had undergone different treatment modalities and met with variable outcomes. **Results:** Three patients diagnosed to have carcinosarcoma of urinary bladder is included in the study. Their mode of presentation, surgical and medical management and clinical outcome is reported. **Conclusions:** Good outcome is reported in a subset of patients of carcinosarcoma who are promptly treated by surgery and adjuvant therapies.

POD 28 – 03

Renal cell carcinoma with level iv cavo-atrialthrombus: Short term and long term outcomes

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Introduction: With the technological advances in imaging, anesthesiology, and uro-oncosurgery, surgical treatment of Renal Cell Carcinoma with a level IV cavo-atrial thrombus is now feasible, and the thrombus can almost always be removed successfully. Patients with level IV Inferior Vena Caval thrombus can be treated safely and effectively via radical nephrectomy and thrombectomy using Cardiopulmonary Bypass combined with Deep Hypothermic Circulatory arrest. **Materials and Methods:** During the study period, 20 patients (16 male and 4 female) underwent surgery for RCC with IVC tumor thrombus (level IV) extending into the right atrium. Preoperative workup included chest, abdomen and pelvis CT scan, abdominal ultrasound with color-Doppler, and Magnetic Resonance Imaging (MRI). Following surgery all of the patients were followed up with a complete blood serum chemistry panel, chest x-ray and abdominal CT at 6 monthly intervals postoperatively. **Results:** A total of 20 patients with mean (SD) age of 49.65 ± 10.32 years underwent radical nephrectomy with IVC thrombectomy. Preoperatively all these patients were diagnosed to have a T3cN0M0 RCC on clinical and radiological imaging. The mean (SD) operating time was 247.25 ± 40.08 mins, and the mean (SD) hypothermic circulatory arrest time was 17.25 ± 1.48 mins at a mean core temperature of $20.4 \pm 2.8^\circ\text{C}$. Complete removal of the tumour thrombus was accomplished in all patients. In a mean follow of 40.85 months, malignancy was the cause of death in 9 of these patients, whereas five other patients died of causes unrelated to RCC and six patients are still alive postoperatively. The median survival after the operation was 31.5 months. **Conclusions:** Patients with level IV IVC thrombus RCC can be treated safely and effectively via radical nephrectomy and thrombectomy using CPB combined with DHCA. This approach is associated with low rates of morbidity and mortality.

POD 28 – 04

Cystic adrenal pheochromocytoma: A single institution experience

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Introduction: Pheochromocytomas are one of the common tumors of adrenal that presents with definite clinical features. Cystic variety of pheochromocytomas (CP) is rare and has varied presentations. We present our experience with this histological variant, which is one amongst the largest series in the world. **Patients and Methods:** We identified five cases of CP from 28 pheochromocytomas in 26 patients who underwent adrenalectomy from January 2000 to June 2006. The clinical and histological data were retrospectively analysed. **Results:** Among the five patients, three were hypertensive, one had an incidentaloma and one was a case of bilateral CP in MEN IIA. There were four males and one female with

age ranging from 27 to 74 years. The biochemical parameters ruled out a functioning mass in three of these patients. The atypical radiology features also overlooked the diagnosis of pheochromocytoma in these patients. All of these patients underwent laparoscopic adrenalectomy. All of these were histologically proven to be CP after immunohistochemistry. The hypertension was cured in all the three patients. Conclusions: CP is a distinct clinical and histological variant of adrenal pheochromocytoma. A high index of clinical suspicion is required to diagnose this entity from atypical adrenal masses. Laparoscopic adrenalectomy is the treatment of choice in CP, as proven from our analysis.

POD 28 – 05

Quality of life after penile cancer surgery

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Aims: (1) To assess health related quality of life in patients who were treated for penile cancer. (2) To assess sexual life in patients who underwent partial penectomy (PP) and penile preserving surgery (PPS). **Materials and Methods:** Fifty six patients of penile cancer from 2009 to 2014 were studied. They were asked to complete European organization for research and treatment of cancer quality of life questionnaire (EORTC-QLQC30) and Hospital Anxiety and Depression scale questionnaires. PP and PPS group were asked to complete IIEF-15 questionnaire to assess their sexual function. **Results:** Thirty-six patients replied to our call. Mean age was 55.38 years. When compared to general population, penile cancer patients (PPS, PP, Total penectomy) scored lower in GH/QOL, and cognitive functioning scores. Physical functioning, Role functioning, emotional functioning, social functioning and fatigue scores were similar between the groups. There was significant decrease in erectile function, orgasmic function, sexual desire, and over all sexual satisfaction in partial penectomy patients after surgery as compared to their scores before surgery. Sexual life of PPS patients was significantly better as compared to partial penectomy. Most patients did not have depression or anxiety disorder and had good psycho social and family relationship. **Conclusion:** Penile cancer surgery does not alter the quality of life much. The sexual function after surgery was significantly decreased in PP patients. Penile preserving surgery whenever possible should be preferred when treating a penile cancer patient without compromising the oncological principles since it preserves the sexual function of the patients.

POD 28 – 06

A rare case of squamous cell carcinoma of a neglected chronic nephrocutaneous fistula (post per cutaneous nephrostomy) with ipsilateral renal infiltration

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Introduction: A non healing nephrocutaneous fistula is a rare complication of percutaneous nephrostomy. These fistulae arise in a setting of chronic disease such as xanthogranulomatous pyelonephritis, tuberculosis of the kidney, chronic stone disease, and occasionally post trauma, surgery. Squamous cell carcinoma is a rare complication of a chronic nonhealing nephrocutaneous fistula. **Case report** We present a case of a 65 years old male patient, who presented with purulent discharge from flank region for seven years. Patient underwent a percutaneous nephrostomy eight year back for calculus pyonephrosis. Tube was removed 6 months after the procedure and patient was lost in follow up. On examination, patient had a fistulous opening at the right flank region with purulent discharge. Edges of the fistula were firm and everted. Wedge biopsy from the fistulous opening was done which was inconclusive. CECT kub was suggestive of right renal calculus with contracted, nonfunctioning right kidney with a nephrocutaneous fistula. Patient was taken up for excision of fistulous tract with nephrectomy. Biopsy report was suggestive of infiltrating keratinizing squamous cell carcinoma involving the sinus tract with chronic pyelonephritis of the kidney. Microscopy showed renal invasion by infiltrating squamous cell carcinoma. **Discussion** Squamous-cell carcinoma is a cancer of a kind of epithelial cell, the squamous cell. As such, prognosis varies depending on histological subtype. In squamous cell cancers arising from scars and sinuses, the metastatic potential is high and prognosis is poor.

Podium Session 29: UROLITHIASIS - 4

POD 29-01

PCNL with air pyelogram: Experience of 193 cases

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Standard PCNL technique is bull eye with combination of contrast and air pyelogram. During last 3 yrs we did 193 PCNL at our centre. We performed all cases with air pyelogram with complete clearance in single sitting. Total 193 underwent PCNL. Patients were given PEGLEC a day prior. 5-6 ml of air was injected into PCS through ureteric catheter to delineate calyces and puncture was made with bull eye technique. Rest of the procedure was standard PCNL with stone fragmentation with pneumatic lithoclast. In miniperc we used holmium yag laser with storz water pump Out of 193 PCNL, 46 cases were miniperc and remaining 147 underwent standard PCNL. All miniperc had D-J stenting without PCN. Standard PCNL had D-j stent along with PCN which was removed 2nd post operative day. Single puncture stone clearance could be achieved in 109 patients. 21 patient needed two puncture. 17 patients required three tract to clear stone. Additional puncture was required in 5 cases to dislodge small fragment which were retrieved through one of three tract. Complete clearance could be achieved in 180 patients. Remaining had insignificant residue. Two had significant residue. Non use of contrast helped us to identify small stones without any masking which is some time observed if we are using contrast or a wrong puncture leads to extravasation and subsequent procedure becomes difficult. Air pyelogram alone is able to delineate calyceal anatomy provided good bowel preparation has been done.

POD 29 – 02

Rise of reactive oxygen species in renal cell line, injured by nano-size calcium phosphate crystals

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Introduction and Objective: Crystals present in the supersaturated fluid in the kidney can induce cellular oxidative stress and play crucial role in the pathogenesis of renal calculi. Calcium phosphate (CaP) is the common crystal form in the early segments of nephron and its size ranges from nano to micron. Recent theories of stone formation suggest crystal attachment to the cell surfaces and changes in the cell membrane alteration for the crystal retention. In the present study amount of reactive oxygen species (ROS), was estimated on healthy cell line and injured cell line to assess the effect of CaP crystals injury on vero cell line. **Methods:** Calcium phosphate crystals were prepared and were confirmed by SEM and FTIR analysis. Vero cell line was injured with nano sized calcium phosphate (CaP) crystals. MTT assay and Trypan blue assay was done to examine the cell viability after cell injury with CaP crystals. MDA assay was done to assess the oxidative stress of the cell. **Results:** Viability of cell line was decreased as cells were injured with nano sized CaP crystals. Amount of malondialdehyde in normal cells was $5.34 \pm 0.18 \mu\text{M}$ while in injured cells it was increased to $9 \pm 0.25 \mu\text{M}$. **Conclusion:** We can conclude from the present study that crystals of calcium phosphate which are of nano size are capable of injuring the cells. This event results in the rise of reactive oxygen species.

POD 29 – 03

Anionic proteins purified from human calcium phosphate renal calculi decrease viability of injured epithelial cell line

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Introduction & Objective: Calcium phosphate (CaP) is the most common crystal which forms in the early segments of the nephron. Biomolecules present in the kidney as well as in the blood filtrate modulate the stone formation. Presence of these biomolecules inside the kidney stones indicate

their involvement in mineralization process. In the present study anionic proteins were purified from the calcium phosphate renal calculi and their effect was studied on injured Vero cell line. Methods: Surgically removed human CaP kidney stones were collected from our hospital. After FTIR analysis stones were washed with NaCl solution and pulverized. Crude extract was prepared with EGTA buffer (pH 6.8) and anionic protein was purified using DEAE column. Effect of proteins was studied on calcium phosphate nucleation assay system. Vero cells were cultured in DMEM with 10% FBS at 37°C and 5% CO₂. Different concentrations of protein were used to study their effect on cell line injured with CaP crystals. Results: Pool 5 of elution profile showed increased stimulatory effect on calcium precipitation while decreased inhibitory effect on phosphate mineralization. The influence of CaP crystal and purified protein on Vero cell viability exhibited dose dependency. Cell line injured with CaP when treated with purified protein showed decrease viability. The cell viability was checked through MTT and trypan blue assay. Conclusion: Addition of anionic protein purified from CaP stones in the injured cell line decreased the cell viability. It was found that anionic proteins from CaP renal stones are involved in promoting kidney stone formation.

POD 29 – 04

Initial experience of ESWL with robotic navigation (visiotrack from EDAP)

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Aim: to study the initial results of ESWL with robotic navigation for the treatment of renal and upper ureteric calculi. Methods: Retrospective analysis of patients who underwent for renal and upper ureteric calculi upto 2.5 cm size between January 2015 to June 2015. Results: Mean age = 35 years (4 year to 65 years) Mean stone size = 1.2 cm

POD 29 – 05

Ho:Yag laser versus pneumatic lithotripsy in management of ureteral stones

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Aim: To compare the efficacy & complications of Holmium:Yttrium-Aluminium-Garnet (Ho:YAG) Laser Lithotripsy vs Pneumatic Lithotripsy in treatment of ureteric calculi. Materials and Methods: From June 2014 to December 2014, a total of 230 ureteric calculi were treated at our institute. Of these, 113 were treated with Laser Lithotripsy (LL) & 117 with Pneumatic Lithotripsy (PL). Stone location, intraoperative findings, postoperative follow up & stone clearance were analysed. Results: There was a difference between the two groups according to overall stone clearance rate (94% in LL vs. 80% in PL, $p = 0.002$). There was no difference for distal ureteric stones in both groups ($p = 0.27$). 10 patients in PL group with proximal ureteric calculi had intrarenally migrated stones that were treated with Flexible Ureterorenoscope & laser lithotripsy. This made statistically significant difference favouring LL for proximal ureteric calculi (94% vs. 68%, $p = 0.007$). Overall complications rate was 26% and was not significantly different in either group ($p = 0.29$). Multivariate logistic regression analysis revealed that proximal location was statistically significant parameter for occurrence of complications ($p = 0.001$ for PL & $p = 0.004$ for LL). Conclusion: Both pneumatic & laser lithotripsy are equally efficient for distal ureteric calculi. Laser lithotripsy had better advantage in management of proximal ureteric calculi especially when combined with flexible ureterorenoscope for migrated calculi.

POD 29 – 06

Factors predicting the spontaneous passage of a ureteric calculus of < 10 mm

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Objective: To evaluate the outcome of the expectant management of ureteric stones and to determine the factors predictive of the spontaneous

passage of stones. Patients and Methods: We retrospectively reviewed the medical records of patients who had ureteric stones of < 10 mm and who were treated conservatively at our institutions during the period Sep-2013–June 2015. The stone-passage rate and time, and different clinical, laboratory and radiological variables, were analysed. Results: In all, 150 patients with ureteric stones were enrolled in the study, of whom 117 (77.9%) passed their stones spontaneously, with a mean (SD) passage time of 24.0 (8.09) days. The cumulative stone-passage rate was 1.6%, 15%, 41.7%, 72.4%, 89.8% and 98.4% at 7, 14, 21, 28, 35 and 42 days from the first presentation, respectively. Patients with a high pain-scale score, stones of < 5 mm, a lower ureteric stone, a high white blood cell count and those with absent computed tomography (CT) findings of perinephric fat stranding (PFS) and tissue-rim sign (TRS) had a higher likelihood of spontaneous stone passage. Patients with stones of < 5 mm, stones in the lower ureter and those with no PFS had a shorter spontaneous passage time. In a multivariate analysis the absence of PFS and TRS were the only significant predictors for spontaneous stone passage ($P < 0.001$ and 0.002 , respectively). Conclusions: The spontaneous ureteric stone-passage rate and time varies with different factors. The absence of CT findings of PFS and TRS are significant predictors for stone passage, and should be considered when choosing the expectant management.

Podium Session 30:UROLITHIASIS - 5

POD 30 – 01

Comparison between three different methods of ureteric dilatation: Teflon dilators versus balloon dilatation versus visual ureteroscopic dilatation

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Introduction and Aim of Study: To compare between three different methods of ureteric dilatation: Teflon step dilators vs. balloon dilators vs. visual ureteroscopic dilatation. Materials and Methods: 150 patients were selected for the study and divided into three groups of 50 each: Group 1 patients underwent ureteric dilatation with flexible teflon ureteric dilators, Group 2 with balloon dilators and Group 3 underwent initial visual dilatation of the ureter with 6/7.5 Fr URS by passing the scope under vision over guidewire and bypassing the stone whenever possible into the pelvis followed by uretero-rensoscopy and lithotripsy with standard 8/9.5 Fr URS. The ease of ureteroscopic access after dilatation, bleeding during dilatation, stone migration rates, distance of displacement and ureteric mucosal and ureteric orifice injuries were compared. Results: Average stone size was 0.92 cm. Bleeding after dilatation from ureteric orifice occurred in ten patients in group 1 and six patients in group 2 and two in group 3. Ureteric mucosal injuries were observed in 6 patients in group 1, 3 patients in group 2 and none in group 3. The ease of access and ease of stone fragmentation were better in group 3. Stone migration during dilatation was seen in 12 cases in group 1, 7 cases in group 2, and 3 cases in group 3. Conclusion: Although three methods are comparable in their effectiveness, stone migration rates, bleeding from ureteric orifices and ureteric mucosal injuries were found to be least with visual dilatation.

POD 30 – 02

Supine percutaneous nephrolithotomy: Our initial experience in a single center

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Objectives: To study the outcome of Supine Percutaneous Nephrolithotomy (PCNL) and to present our initial experience in a single center with this procedure. Materials and Methods: We retrospectively reviewed case records of 32 patients who underwent Supine PCNL from January 2012 till date. Patients with Renal calculi of maximum diameter greater than 20 mm limited only to Pelvis and Lower calyx, with associated comorbidities like Obesity, Poor Cardiopulmonary reserve were selected. CT KUB done in all the cases. PCNL was done in modified supine position with patient supine, bolster beneath the ipsilateral lumbar region with both the legs flexed, but ipsilateral leg more elevated. DJ Stenting done in all cases. Stone clearance rate was assessed by Plain radiographs and

Ultrasonography. Postoperatively patients were followed up for upto 3 months. Results: Mean age of our patients was 39.6 years (range 17–58 yrs). Stone maximum diameter ranging 22–31 mm. Operative time was 70–92 minutes. Stone clearance rate was 84.37% postoperatively and 93.75% at the end of 3 months (including ureteroscopy, ESWL, medical interventions). Postoperatively Hemoglobin drop was 0.9–1.9 gm/dl and blood transfusion was needed in 5 patients (15.62%), 6 patients (18.75%) developed fever, one patient (3.12%) developed urosepsis. Pleural injury was noted in one patient (3.12%). No Visceral (Colon, Liver, Spleen) injuries, mortality were noted till date. Conclusions: Supine PCNL is a safe and effective procedure with low complication rate, shorter operation time with good outcome in selected patients.

POD 30 – 03

TUFF-PCNL: Totally ultrasound-guided fluoro-free percutaneous nephrolithotomy

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Aim: To present our experience of Totally Ultrasound-guided Fluoro-Free (TUFF) percutaneous nephrolithotomy eliminating the use of fluoroscopy. **Patients and Methods:** From Oct-2014 to March-2015, after careful selection, a total of 30 candidates (23 men and 7 women), with a mean age of 38.5 (range 24–55 yrs), were included in this study. We eliminated radiography completely for both access to the collecting system and tract dilation. Both were performed under ultrasound guidance. Only patients having pure renal pelvic and lower calyceal stones were included in the study. All the patients were operated in the standard prone position. **Results:** 25 patients had complete stone clearance. The stone-free rate was 84% in the patients. There were no major complications intra-operatively or postoperatively. The mean operative time was 79.9 mins (range 45–130 mins). The mean hospitalization time was 4.2 (range 3–7 d). **Conclusion:** Totally ultrasound-guided Fluoro-free PCNL has satisfactory outcomes compared with the standard technique of PCNL, without any major complications and with the advantage of preventing radiation hazards and damage to the adjacent organs.

POD 30 – 04

Ureteroscopic management of calculus disease in patients with coagulopathy secondary to chronic liver disease: Myths and facts

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Introduction: Hepatic-coagulopathy is a common entity seen in 70–80% of the patients with chronic liver disease (CLD) and it differs remarkably from other coagulopathies. Urological interventions pose a unique challenge in these patients with “uncorrected coagulopathy”. We have evaluated the outcomes of ureteroscopic management of renal and ureteric calculi in these patients. **Materials and Methods:** We retrospectively analysed 13 ureteroscopic procedures in patients with hepatic-coagulopathy (CLD group) and compared it to 41 ureteroscopic procedures done in patients without coagulopathy (Non-CLD group). Thromboelastogram (TEG) guided the transfusion requirements in the peri-operative period. Post operative outcomes of both the groups were compared statistically. **Results:** Both the groups had comparable demographic profile, preoperative haemoglobin levels, platelet counts and stone size. Based on TEG report, one patient received preoperative platelet transfusion and 3 patients received preoperative FFPs. Patients in CLD group underwent 5 rigid ureteroscopic procedures (URS) and 8 flexible ureteroscopic procedures (RIRS), while the numbers were 14 and 27 in Non-CLD group respectively. Post operative complication rates (15.4% Vs 9.8%, $p = 0.55$), hospital stay (1.46 ± 0.88 days Vs 1.27 ± 0.67 days, $p = 0.41$) and stone free rates (78.4% vs 81.1% respectively, $p = 0.77$) were comparable in both CLD and Non-CLD group respectively. The rate of postoperative haematuria requiring blood transfusion was significantly higher in CLD group (15.4% Vs 0, $p = 0.01$). **Conclusions:** Ureteroscopic management of renal and ureteric calculi is safe in CLD patients. Though the risk of bleeding in these patients is significantly higher than in non-CLD subjects, but is not as high as perceived due to underlying abnormal

laboratory parameters. Decisions regarding perioperative transfusion in these patients should be guided by thromboelastography rather than other standard laboratory tests.

POD 30 – 05

Superperc in varieties of upper tract urolithiasis and for renal stone >1.5 cm

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Introduction and Objectives: Superperc is an upcoming modality for stone less than 1.5 cms. Advances in optics & availability of holmium laser lithotripsy have made MIPP effective. Superperc has suction capability with retrograde irrigation via multihole ureteric catheter. With increased speed of clearance of fragments, we evaluated feasibility in varied cases of upper tract urolithiasis with stone greater than 1.5 cms. **Methods:** All available varieties of low volume upper tract urolithiasis were treated by this technique. Multihole ureteric catheter is placed cystoscopically. In prone position, suitable calyx preferably upper calyx is punctured & 10/12F superperc sheath is placed. Short ureteroscope is used. Laser lithotripsy is used to fragment/dust the stone. Suction combined with retrograde irrigation is used to clear the fragments rapidly. No nephrostomy is kept. DJ stent is kept if needed. **Results:** Total 43 cases were treated in 16 months. It included renal stone >1.5 cms, upper ureteric stones, multiple stones, 2 with horseshoe kidney & 1 anomalous kidney, 1 with 2 years of age. 2 cases required conversion to 15F tract & one 22F tract to complete clearance. One needed 2nd stage. There was 100% clearance. 7 patients had very minor hematuria, none needed transfusion. 5 had minor fever postoperatively. 20 patients had DJ stents & one had nephrostomy. Average hospital stay was 2 days. **Conclusions:** It is feasible to offer superperc in wide varieties of upper tract urolithiasis. Multicentric trials are needed to evaluate feasibility, safety & efficacy of superperc.

POD 30 – 06

Outcome of percutaneous nephrolithotomy: Is it affected by body mass index?

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Objective: Management of renal calculi in obese patients a challenge for urologists. The efficacy and safety of percutaneous nephrolithotomy (PCNL) procedure in obese and morbidly obese patients is evaluated in our study. **Materials and Methods:** It's a prospective study conducted between August 2013 and August 2015, during which 611 patients underwent PCNL. According to the World Health Organization (WHO) classification of body mass index (BMI), patients were stratified into four groups: <25 kg/m² (average), 25–29.9 kg/m² (overweight), 30–39.9 kg/m² (obese), and >40 kg/m² (morbidly obese). Those patients with a BMI under 18 kg/m² and under 18 years of age were excluded from the study. Intra-, and postoperative outcomes of PCNL were compared between groups. **Results:** Patients had a mean age of 41 ± 13.62 years. The mean stone size, mean number of stones, staghorn stone rate and history of previous shock wave lithotripsy were similar in all groups. The overall stone-free rate was 87 percent. The mean operation time was longer in the morbidly obese group but it was not significantly different from that in the other groups. No differences were observed in hospital stay, complication or stone-free rate among four study groups. **Conclusion:** Outcome of PCNL is not affected by body mass index. So percutaneous nephrolithotomy is a safe and effective treatment for renal stone disease even in morbidly obese patients.

Podium Session 31: UROLITHIASIS - 6

POD 31 – 01

Amplatz dilatation versus balloon dilatation for access in percutaneous nephrolithotomy: A prospective randomized study

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Objective: To compare amplatz dilation versus balloon dilatation in patients undergoing percutaneous nephrolithotomy at our tertiary care centre in a prospective randomized manner. **Materials and Methods:** It is a prospective randomized study. It has two groups. The first has 41 patients and renal dilation was done using the standard amplatz dilators. The second has 40 patients and renal dilation was done using balloon dilatation. The radiation exposure time during renal dilation was calculated. Post operative outcomes in terms of complications, stone free rates, ancillary procedures for residual stones and hospital stay. **Results:** The tract was dilated successfully in all cases. The operative duration along with radiation exposure was less in single step renal dilatation (p value < 0.005). Perioperative complications were, Grade I complications were recorded in 12.6%, grade II in 20.8%, grade IIIa in 4.4%, grade IIIb in 0.7% in balloon dilatation according to the modified Clavien grading system. There was no statistically significant difference was found between two groups in terms of peri-operative complications, stone free rate and hospital stay. **Conclusion:** Balloon dilatation is feasible with less radiation exposure and less operative duration. The outcomes were comparable with those of standard amplatz renal dilatation.

POD 31 – 02

Using the modified Clavien grading system to classify complications of percutaneous nephrolithotomy: Our experience

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Introduction: A modified Clavien classification system has been proposed to grade perioperative complications. We share our experience in grading the complications of percutaneous nephrolithotomy (PCNL), according to this new classification. **Methods:** A total of 809 PCNLs were performed between 2010 and 2014, and were reviewed retrospectively. The modified Clavien classification system was applied which classifies the perioperative complications into five grades. Grade 1 defined all events which would resolve spontaneously or require a simple bedside intervention. Grade 2 complications require specific medications, like an antibiotic, blood transfusion, etc. Grade 3 complications required some surgical or endoscopic intervention. Grade 4 complications included adjacent organ injuries or organ failures and death was considered a grade 5 complication. **Results:** A total of 253 perioperative complications were observed in 237 (29.29%) patients. There were 37 grade 1 (4.5%), 128 grade 2 (15.8%), 52 grade 3a (6.42%), 25 grade 3b (3.1%), 8 grade 4a (1.0%), and 2 grade 4b (0.2%) complications, and 1 death (0.1%). Most complications were related to bleeding and urine leakage. **Conclusions:** The modified Clavien system is a graded classification scheme for reporting the complications of PCNL which is useful for monitoring and reporting short term outcomes.

POD 31 – 03

Do the scoring systems really predict stone free status after PCNL?: A prospective study

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Objective: To prospectively compare Guy's Stone Score, S.T.O.N.E. Nephrolithometry Score and CROES Nephrolithometric Nomogram to predict the success of PCNL and to assess the correlation with the peri-operative complications. **Methods:** We prospectively evaluated all consecutive patients who underwent PCNL at our institute between 1st November 2013 and 31st May 2015. Above scoring systems were applied on pre-operative NCCT. All patients underwent PCNL and peri-operative complications and stone free rates (SFR) were recorded. ROC curves were drawn and AUCs were compared. **Results:** A total of 48 renal units were included in the study. Overall SFR of 62.2% and a complication rate of

52.2% was observed. Presence of hydronephrosis and staghorn stones were the only significant variables associated with the residual stones on multivariate logistic model. Stone free patients had significantly lower Guy's grade (1.8 vs 3.4) and S.T.O.N.E. scores (6.4 vs 9.4) and higher nomogram scores (81.9 vs 61.8%) (each p value < 0.001) as compared to the patients with residual stones. All the scoring systems were significantly associated with the SFR (each p value < 0.001). There was no significant difference in the AUC's for all the scoring systems (AUC 0.858, 0.923 and 0.931 respectively). Furthermore, all the scoring systems had significant correlation with the Clavien grade of complications ($r = 0.29$, $p = 0.045$; $r = 0.40$, $p = 0.005$ and $r = -0.295$, $p = 0.04$ respectively). **Conclusion:** All scoring systems equally predicted the SFR after PCNL and also had significant correlation with the Clavien grade of complications.

POD 31 – 04

Applying scoring systems to determine stone free status after PCNL: Is it a cakewalk?

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Objective: Contemporary tools to predict the success rate after percutaneous nephrolithotomy includes Guy's Stone Score, S.T.O.N.E. Nephrolithometry score and CROES Nephrolithometric Nomogram. We aim to present the difficulties and discrepancies encountered in the calculation and the application of these scoring systems pre-operatively. **Methods:** We prospectively evaluated all consecutive renal stone patients who underwent percutaneous nephrolithotomy at our institute during study period 1st November 2013 to 31st May 2015. We identified each individual variable and applied them on pre-operative non contrast CT scan images and calculated Guy's Stone Score, S.T.O.N.E. Score and CROES Nomogram score for each patient. **Results:** Out of all the three scoring systems, Guy's Stone Score was the easiest and S.T.O.N.E. score was the most difficult to apply. Two variables of the Guy's Stone score, almost all the individual variables of the S.T.O.N.E. score and three of the six variables of the CROES nomogram had the potential for discrepancies if applied by different observers. **Conclusion:** A standardization in the calculation and application of each individual variable to accurately validate these models of prediction is required. A single clear cut definition of staghorn stone should be used across the literature and the issue of partial staghorn stones should be addressed. The size of residual fragments, timing and type of imaging technique to document stone free status also needs to be standardized.

POD 31 – 05

Optimal management of lower pole calyceal stone 15 to 20 mm: Our institutional experience

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Purpose: To compare the stone clearance rate and early complications of shock wave lithotripsy (SWL) and percutaneous nephrolithotomy (PCNL) for solitary lower-pole renal stones measuring 15 to 20 mm. **Materials and Methods:** This was a retrospective matched-pair analysis of 102 patients (58 in the SWL and 44 in the PCNL group). Preoperative imaging was done by use of noncontrast computed tomography (CT kidney, ureter, and bladder [KUB]) and ultrasound KUB to assess the largest dimension of the stones. Only patients with radiopaque stones were included. The stone-free rates were assessed with plain X-ray and ultrasound at 4 weeks. Data were analyzed. **Results:** The patients' demographic profiles (age, body mass index) and the stone sizes were comparable in the two groups. The mean stone size was 17.4 ± 2.12 in the PCNL group compared with 17.67 ± 2.04 in the SWL group. At 4 weeks, 83% of patients undergoing PCNL were stone-free compared with 51% in the SWL group. The EQ for the PCNL group was 76% compared with 44% for the SWL group. Ancillary procedures were required by 9% of patients in the PCNL group compared with 15% in the SWL group. The complication rate was 19% in both groups. The SWL complications were minor. **Conclusions:** Stone clearance from the lower pole of solitary stones sized 15 to 20 mm at the greatest diameter following SWL is poorer. These calculi can be better managed with percutaneous surgery owing to its higher efficacy and acceptably low morbidity

POD 31 – 06**The role of tadalafil and tamsulosin alone and in combination therapy in lower ureteric stone expulsion: A prospective comparative study****Syed Zahid Raza, Vijaya Kumar R, Dayanand, Girish TD, Amruthraj Gowda, Madappa KM**

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Introduction: The incidence of urinary stones is increasing day by day. The incidence rate of lower ureteric stones is 70%. Medical expulsive therapy developed after an understanding of various pathophysiologic bases for urinary stones. Alpha-1 adrenergic receptor antagonists are most commonly used, which act by creating an increased pressure gradient around the stone, which propels the stones out. Recently, phosphodiesterase-5 inhibitors like tadalafil have been shown to act by a CGMP signaling pathway to cause smooth muscle relaxation and help in stone expulsion. **Objectives:** To compare the safety and efficacy of tamsulosin, tadalafil and combination of tamsulosin with tadalafil as medical expulsive therapies for lower ureteric stones. **Materials and Methods:** Between September 2013 and July 2015, 90 adult patients presenting with distal ureteric stones sized 5 to 10 mm were randomized equally to treatment with tamsulosin (group A) or tadalafil (group B) and combination of tamsulosin with tadalafil (group C) Therapy was given for a maximum of 4 weeks. The stone expulsion rate, time to stone expulsion, analgesic use, number of hospital visits for pain, follow-up and endoscopic treatment, and adverse effects of the drugs were noted. Statistical analyses were done by using Student t-test and chi-square test. **Results:** There was a higher expulsion rate 78% in group C compared to 75% in group B and 70% in group A. The analgesic requirement and time to expulsion was lesser in group C compared group A and B. There were no serious adverse effects noted. **Conclusion:** Medical expulsive therapy for distal ureteric stones using combination of tamsulosin and tadalafil is safe and efficacious compared to monotherapy with either of the drugs alone.

Podium Session 32: FEMALE UROLOGY AND NEUROVESICAL DYSFUNCTION**POD 32 – 01****Transvaginal subfascial synthetic mesh sling in female stress incontinence: A novel technique****Abdul Rouf Khawaja, Sajad Malik, Arif Hameed, Saleem Wani, Baldev Singh**

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Objective: To assess the novel technique Transvaginal subfascial sling (synthetic mesh) in female stress incontinence in terms of postoperative results, cost effectiveness and complications. **Materials and Methods:** From August 2002 to August 2015, a retrospective study was conducted to evaluate patients with transvaginal subfascial sling for treatment of female stress incontinence. A total 103 patients were enrolled in our study with predominant symptoms of stress incontinence and associated urge incontinence in few patients. All patients were preoperatively investigated for urinary symptoms and underwent uroflowmetry with residual urine and occasional urodynamics. patients with concomitant pelvic organ prolapse were excluded from the study. Postoperatively patients were checked for improvement in stress incontinence, urinary retention, voiding difficulty and denovo urge incontinence. **Results:** Mean age of the patients were 43.5 years and were multiparous. Total 10 patients (9.71%) develop urinary retention in post operative period and catheter was removed after 2 day. All (100%) patients improved symptomatology and had occasional stress incontinence in initial month. No intraoperative complication occurred, only one patient (0.97%) had urethral erosion on follow up. None of our treated patient develop denovo urge incontinence. However patients with preoperatively urge incontinence needs anticholinergic in postoperative period for 1-2 months. None of our patients had sexual dysfunction on follow up. Operative time was 30 mts-45 mts and cost of the treatment including mesh was 3000 INR. Furthermore, 10 patients (9.70%) who experience transient postoperative retention had no symptoms of urinary retention on follow up. **Conclusion:** Transvaginal subfascial sling is a modification of the original mid urethral sling procedure with an advantage

of being less invasive, simpler to learn and achieve similar results compared to TVTO procedures. Moreover a redo procedure is easier to do without apprehension of injury to the surrounding structures.

POD 32 – 02**A study of urological problems in antenatal period****Rajeev Ayyappan R, Leela Krishna P, Govindarajan R, Ilangoan M, Jayaganesh R, Saravanan K, Muthulatha N**

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Introduction and Objectives: Pregnancy and delivery is a time of major anatomical and physiological changes to the urinary tract which may result in an alteration in urinary tract function, most commonly manifested by the development of urinary symptoms. These changes may be further influenced by alteration in renal function and intercurrent pathology in pregnancy. The objective of this study is to study the incidence, presentation and management options for various urological disorders occurring in pregnancy. **Methods:** Over the study period of 18 months, antenatal patients were evaluated for urological problems based on symptoms, clinical findings, laboratory and radiological investigations. Patients having evidence of urological diseases were included in the study. The incidence of urological problems and various modalities and efficacy of treatment are evaluated. **Results:** Fifty two antenatal patients presenting with symptoms or investigative findings of a total of 2150 antenatal patients were evaluated. The most common disorder in pregnancy was found to be asymptomatic bacteriuria followed by symptomatic infection, pyelonephritis and calculus disease. Two cases of renal malignancy also presented in the antenatal period, both managed by nephrectomy. **Conclusion:** It is essential to understand and treat the urological problems in pregnancy with attention to the unique anatomic and physiologic factors influencing them as a result of the gravid status of the patient.

POD 32 – 03**Laparoscopic repair of recurrent vesico-vaginal fistulae: Experience of 7 cases****Rizvi SJ, Goyal NK, Valsangkar R, Bansal J, Pal BC, Modi PR**

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Objectives: To describe our experience with laparoscopic repair of recurrent vesico-vaginal fistulae (VVF). The first attempt at repair usually has the best chance of success, and subsequent operations are more difficult and have poorer results. **Methods:** we retrospectively reviewed data on laparoscopic repair of seven recurrent VVFs performed between Jan 2013 to June 2015. All patients had developed a VVF secondary to hysterectomy, and had undergone a previous open or laparoscopic repair. The number, size, position and proximity to the ureteric orifice were noted at cystoscopy. Patients selected for laparoscopic repair had a single supratrigonal fistula not involving a ureteric orifice. All patients underwent a transperitoneal laparoscopic repair. The bladder was bivalved down to the fistula, the fistula tract divided, flaps of bladder and vagina elevated and sutured separately. Omental imposition was done in two cases where omentum was available. **Results:** mean operative time was 190 mins (range 152 mins to 310 mins). No patient required a blood transfusion. Mean time to discharge was 6 days (range 5-10 days). A cystogram was performed at 3 weeks and the catheter removed when no leak was demonstrated. All patients voided well and none had recurrence of VVF at a mean follow-up of 13 months. **Conclusions:** Laparoscopy is a safe and feasible modality for the repair of selected recurrent VVFs. It allows good access to and easy dissection and suturing of structures deep in the pelvis. Omental interposition does not seem to be essential for the success of the operation.

POD 32 – 04**Transobturator tape for stress urinary incontinence: Our experience****Saisriharsha P, Sanjay P, VenkateshRao K, Mahesh Babu B, Bivek Kumar, Praneeth P**

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Objectives: To Study the Outcome of Transobturator (TOT) Repair for Stress Urinary Incontinence (SUI). **Materials and Methods:** Prospective Observational Study of 61 patients who underwent TOT repair in our

institution from January 2012 till date. Patients were selected by detailed history, Physical examination and Urodynamic studies. Women with Mixed Urinary Incontinence, Urge Incontinence, Previously operated for SUI, Patients with Intrinsic Sphincter deficiency were excluded from the study. TOT repair was done by Outside In technique, by placing a strip of Polypropylene mesh as a mid urethral sling through the incisions in both the groins and in vagina. Catheter removal was done 24 hours after surgery. Postoperatively patients were followed up for a period of 2 years. Results: Mean age of our patients was 45.6 years (range 26 – 58 yrs). Success rate of the procedure was 100% with complete cure in 55 patients (90.16%) and Partial improvement 6 patients (9.83%). Complications encountered were Bladder injury in 1 case (1.63%), Urethral injury in 1 case (1.63%), Lateral vaginal wall erosion in 3 cases (4.91%) intraoperatively. Post operatively 8 patients developed Retention of urine after removal of catheter (13.11%). Dyspareunia during initial period in 8 patients (15.38%). Post Operative Urgency in 14 patients (22.95%) and Thigh pain was noted in 6 patients (9.83%). We have not noted any Mesh Erosion or Extrusion till date. Conclusions: TOT repair is a safe and effective procedure for treatment of SUI with low complication rate, shorter hospital stay with good outcome.

POD 32 – 05

Topical estrogen cream application versus meatal self dilatation in the management of recurrent external meatal stenosis in postmenopausal female patients

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Introduction and Objectives: External meatal stenosis, although more common in males, is a challenging clinical entity to manage. However, due to the low morbidity associated with such problem, female urethral stenosis is often underestimated and undertreated. The aim of the present study is to compare the efficacy of topical estrogen cream and weekly once meatal self dilatation in the management of recurrent meatal stenosis in postmenopausal Indian women. **Methods:** All postmenopausal females (>45 yrs) presenting with symptomatic meatal stenosis in a period of 6 months were considered for the study. The patients were randomised into two groups: Group I received topical estrogen application daily, whereas Group II received weekly self meatal dilatation. The procedure was evaluated at the end of 6 months using UFR study and LUTS. **Results:** Of the 38 patients enrolled in the study (20 in Group I and 18 in Group II), 6 patients of Group I and 5 patients of Group II reported recurrence of symptoms, as confirmed with UFR study. **Conclusions:** Our initial experience of external meatal self dilatation is encouraging and is an acceptable inexpensive and simple treatment for patients to maintain urethral patency but there is no significant difference when compared with topical estrogen cream.

POD 32 – 06

Nasogastric abdominal sensor in patients with poor anal tone: Our preliminary experience

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Introduction: The standard transducer for abdominal pressure (Pabd) measurement during urodynamics (UDS) is using a rectal transducer. When the rectum is not available or when anal tone is poor that rectal balloon slips, accurate Pabd recording becomes difficult. Only anecdotal case reports of nasogastric or engineered intravaginal sensors exist. Here we present our preliminary series of nasogastric tube placement for Pabd measurement. **Methods:** Retrospective case record review. **Results:** Out of 885 urodynamic procedures done between 2013 and 2015, 21 (2.37%) were performed using nasogastric tube as Pabd sensor and 18 (85.7%) were males. The median age was 44 years. The indications were neurogenic bladder in 12, bladder outlet obstruction in 2, incontinence in 2, post abdominoperineal resection in 2, post meningomyelocele repair, cervical myelopathy and traumatic paraplegia in 1 each. Two patients post APR needed nasogastric tube due to postoperative status and 19 (90.5%) had poor anal tone. It was possible to make definitive urodynamic diagnosis in all patients using NG Pabd sensor. Calibration initially and throughout the

study was similar to that of rectal Pabd sensor. There were no problems with nasogastric tube tolerance or accidental slippages during the study. **Conclusion:** Use of nasogastric sensor is a feasible, accurate and viable alternative for Pabd measurement in patients with poor anal tone or absent rectum due to postoperative status.

Podium Session 33: ENDOUROLOGY AND LAPAROSCOPY – 5

POD 33 – 01

Comparison of surgical outcomes in the treatment of renal stone of size <15 mm between mini PCNL and RIRS: A single centre, randomized, prospective study

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Introduction and Objectives: During the last three decades, treatment modalities for renal calculi have undergone several significant changes. Mini PCNL and RIRS has recently been considered as very efficacious methods for small burden renal calculi. Since the stone free rates are comparable for both these procedure we have planned to compare these two techniques in Indian scenario. The purpose of this study is to compare the surgical outcomes of mini-PCNL and RIRS for renal stone of size <15 mm. **Methods:** Total 70 patients of renal calculi of size <15 mm admitted in urology department at PGIMS Rohtak were included in study. 35 patients included in mini PCNL group & 35 patients in the RIRS group. Mini PCNL procedure performed using 18F sheath and 15 Fr nephroscope and RIRS performed using a flexible ureteroscope (Olympus URF P6R). Surgical outcomes of both the procedure compared in form of mean operative time, transfusion requirement, complication rate, hospital stay and stone free rates. The complication rate was assessed using modified Clavien system. The stone free rates were compared in both groups on 3rd post-operative day and follow up at 1 month using the standard radiological imaging (plain X-ray KUB/USG) available. **Results:** The mean stone size in mini-PCNL group was 12 mm \pm 0.85 and in RIRS group was 11.2 mm \pm 0.97. The stone location in lower calyx was most common for mini-PCNL group and renal pelvis for RIRS group. Lower calyceal puncture was done in most of the patients in mini PCNL group (19 patients, 54.28%). Totally tubeless procedure was done in 12 patients (38.28%) in mini PCNL group and in rest either DJ stent/nephrostomy or both placed. DJ stent placed in all cases after RIRS. The mean operative time per patient was 62.5 \pm 19.5 minutes in RIRS group, while it was 45.7 \pm 13.5 minutes in mini-PCNL group ($p < 0.001$). None of the patients in the study require blood transfusion. Mean haemoglobin drop was higher in the mini-PCNL group (0.95 vs 0.46 gm/dl) ($p < 0.001$). Clavien grade I complication rate was 8.5% in RIRS group vs 14.28% in mini-PCNL group ($p < 0.001$). 2 patients in mini PCNL group developed clavien grade II complication which was managed conservatively. The stone clearance rate was 94.28% in mini-PCNL group, while 88.57% in RIRS group at 1 month follow-up. Residual stone after both the procedure was managed successfully by ESWL. The hospital stay was slightly higher in mini-PCNL group then RIRS group (55 \pm 17 hr vs 48 \pm 15 hr) but was not statistically significant ($p > 0.005$). **Conclusion:** RIRS is safe, effective and with low complication rate, alternative to mini PCNL for small burden renal stone disease. The stone free rates are higher for mini-PCNL.

POD 33 – 02

Outcome of PCNL in chronic renal failure patients due to urolithiasis

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Introduction: Chronic Renal failure due to Urolithiasis is a major problem in the developing and underdeveloped countries, specially asymptomatic and neglected stones which often precipitate renal failure if not timely intervened. **Objectives:** To evaluate outcomes of surgical intervention in patient with urolithiasis associated with renal failure. **Materials and Methods:** From 1st august 2013 to 15th July 2015, 21 patients with renal failure due to urolithiasis were prospectively evaluated for surgical

outcomes in terms of complete recovery or improvement in renal functions. Exclusion criteria were 1. small and contracted kidney 2. extremely thinned out renal parenchyma with grossly dilated PCS 3. uncontrolled coagulopathy 4. relative contraindication morbid obesity. Results: In our study 21 patient had renal failure due to urolithiasis. The mean age was 46.57 ± 2 years, and male to female distribution was 2.1:1. The mean stone burden was 1015 mm² and mean puncture done were 1.23. Out of 21, in 16 (76.19%) patients single puncture was done while double or more punctures needed in 5 patients. Intra operative blood transfusion was needed in 5 patients. The mean pre-op Creatinine was 2.43 mg/dl. In follow up 6 (28.57%) completely recovered, 5 (23.8%) had improvement, 9 (42.85%) had same renal function (dialysis free) while there are no patients without recovery and on dialysis dependent and there was 1 (4.76%) mortality. Conclusion: Early and timely surgical management of the obstruction due to urolithiasis in renal failure may salvage and improve the overall kidney function and avoid the tedious regular hemodialysis.

POD 33 – 03

Early comparative study of 3D vs. 2D laparoscopy in urology

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Introduction and Objectives: Laparoscopic procedures in urology have proven to be safe, less morbid and effective in comparison to open procedures. 3D laparoscopic systems have developed stereoscopic vision in which the depth perception is achieved by different unique images received by each eye. The result of 3D laparoscopy in comparison with conventional 2D laparoscopy during various urological procedures is presented. **Materials and Methods:** A prospective, randomized, comparative study to evaluate advantages of 3D over 2D laparoscopy in urology. 108 patients (2D n = 53; 3D n = 55) were randomized to either operative group. Single Senior Operating surgeon. Common urological surgeries like Simple & Radical nephrectomy, Pyeloplasty were chosen. Parameters like Total operative time, Dissection & Suturing time, Blood loss, Hospital stay, Complications (Clavien Dindo), VAS score for pain were assessed. Experience of operating surgeon in terms of superiority and inferiority was recorded using Likert scale. State Trait Anxiety Inventory for Adults (STAI) to quantify emotional, physical, and cognitive aspects of stress experienced. Statistical analysis was done by 't' test. **Results:** VAS score, Hospital stay and Complications after surgery showed no statistical significance in both groups. Highly statistical significant difference was seen in 3D to 2D in Total operative time ($p < 0.0003$), Blood loss ($p < 0.028$), Dissection, Suturing and Stenting time ($p < 0.0001$), STAI score ($p < 0.0001$). Experience of operating surgeon was superior in 3D in comparison to 2D. **Conclusion:** 3D system offers many advantages of robotic surgery at low cost and use of conventional laparoscopic instruments. Enhanced operative performance and greater surgeon comfort and chances of less to error.

POD 33 – 04

Assessment of changes in core body temperature in percutaneous nephrolithotomy

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Aims: (1) To study the core body temperature changes in percutaneous nephrolithotripsy (2) To study various factors affecting the core body temperature in percutaneous nephrolithotripsy. **Objective:** To assess the implications of core body temperature changes and their assortment management. **Introduction:** Percutaneous nephrolithotripsy is commonly performed procedure to deal with renal stones. but this procedure is not free from procedure related complications like risk of bleeding, damage to surrounding organs, hypothermia, infection, etc. in this study we decided to assess the temperature changes in percutaneous nephrolithotripsy and various factors affecting these temperature changes viz age of the patient, sex, comorbidities, amount of irrigation fluid used, duration of surgery, room temperature. Since surgical hypothermia itself poses patient to the risk of infection, bleeding, ICU care, longer duration of hospital care. thereby increasing procedure related morbidity. **Materials and Methods:** This is a prospective observational study, in which we studied 25 consecutive

patients who were posted for mini pcnl after thorough pre-operative assessment and work up. Nasal probe inserted in all patients once the patient is given prone position after ureteric catheterisation and rpg in order to monitor core body temperature changes. these temperature changes are then assessed with respect to age of patient, sex, comorbidities, duration of surgery, amount of irrigation fluid used and room temperature. **Results:** We found significant changes in core body temperature in these patients who underwent percutaneous nephrolithotripsy. Amount of irrigation fluid used and duration of surgery being the most common factors influencing these changes. With other factors like age of the patient, associated comorbidities and room temperature further aggravating the changes in core body temperature. **Conclusion:** Percutaneous nephrolithotripsy on vertue of irrigation fluid used poses patient for significant risk of hypothermia and hypothermia related complications like sepsis, coagulopathy, and hemorrhage. Thereby increasing the procedure related morbidity and mortality. If these changes in core body temperature are taken into consideration and dealt appropriately then this procedure related morbidity can decrease significantly.

POD 33 – 05

Robotic-assisted laparoscopic reconstructive surgery in the lower urinary tract: A single center experience

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Introduction: Reconstruction of the lower urinary tract (UUT) can be complex secondary to need for delicate tissue handling and precise suture placement to create tension free anastomosis in the area of difficult access that is pelvis. The improved dexterity, visualization, and ergonomics of robotic systems have applied naturally to reconstruction and have facilitated intracorporeal suturing compared with traditional laparoscopy. The prime limitation of the robotic use is the cost. Thus it is essential to define the judicious use of robot. We will be sharing our experience of optimized use of robot in reconstruction of the lower urinary tract. **Materials and Methods:** 25 patients underwent different type of lower urinary tract reconstructive procedures using robot assisted laparoscopic approach at our institute. The surgeries involve 13 ureteric reimplantations, 10 vesicovaginal fistula and 3 augmentation cystoplasty. In all these robotic surgeries we worked out the optimized use of robotic instruments in order to cut down the expenditure. **Results:** All the surgeries were uneventful with a smooth postoperative course. No complications have been encountered and all the patients are doing well. **Conclusion:** Our experience made it clear that Robot-assisted reconstructive urology surgery is feasible and can be safely used without compromising the generally accepted principles of open surgical procedures. The functional outcome was good and severe postoperative complications were rare. Robotic techniques are effective and minimize morbidity for all types of urinary reconstruction.

POD 33 – 06

Tips and tricks of laparoscopic partial nephrectomy: Our experience

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Introduction: Laparoscopic Partial Nephrectomy (LPN) has been accepted as a popular procedure among urologists for small renal tumors. We report different techniques and trips and our experience with LPN. **Methods:** Data was evaluated for first 27 cases. Perioperative, pathological and oncological outcomes were evaluated. All LPN were transperitoneally done. Demographic, tumor characteristics and complications rate were collected in addition to oncological outcome. **Results:** mean age was 52 years (42-70), mean tumor size 4.1 cms (2.5-5.5), average operative time was 150 min (120-186), one case was converted to open surgery. Mean blood loss was 110 ml (50-140), mean warm ischemia time 16 min (12-22) and length of stay was 5 days (4-7). There was no mortality and one patient had haematuria 3 rd day which settled with complete bed rest. Surgical margins were negative in all. With mean follow up of 15 months no recurrence or metastasis noted. **Conclusions:** Laparoscopic partial nephrectomy is well tolerated with acceptable ischemia time. Less blood loss and better margin status

Podium Session 34: MALE INFERTILITY AND ANDROLOGY

POD 34 – 01

Patterns and interspousal correlatation of erectile function in a tertiary centre in Chennai: An observational study

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Erectile dysfunction (ED) has been defined as the inability to achieve or maintain an erection sufficiently rigid for achieving satisfying sexual intercourse. Prevalence in Asia is between 8-81%. Aim: To screen for the prevalence of erectile dysfunction and its risk factors in patients. To assess the inter-spousal correlation of perception of erectile function. Methods: A cross sectional observational non-interventional study in 100 couples in a tertiary care hospital were interviewed using a pretested questionnaire screening for the risk factors for erectile dysfunction, incorporating the IIEF - 5 scale. Results: The average age of males was 42.16 years. 47 men were either unskilled or skilled workers. 61 had studied till 6th-10th grade. The subjects predominantly belonged to the upper lower class – 56 as per modified kuppusamy scale. 42 males had no erectile dysfunction according to IIEF-5 score as graded by them 3 had severe erectile dysfunction. As per females 51 had no erectile dysfunction according to IIEF-5 score and 5 severe dysfunction as per IIEF-5 score. There was no significant difference in responses given to IIEF-5 score questions based on the subject's educational status, occupational status and modified kuppusamy scales using Fischer exact test. There was no significant differences in the prevalence of comorbidities among the different scores. The spouses did not agree significantly in their responses regarding the erectile function of the males using kappa measure of agreement. Conclusion: Significant prevalence of erectile dysfunction present in low socioeconomic group with significant disagreement in perception of erectile function among spouses.

POD 34 – 02

The status of serum urotensin-II in patients with erectile dysfunction

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Introduction and Objectives: To evaluate the status of serum Urotensin-II (U-II) in patients with erectile dysfunction (ED) and the effect of tadalafil on U-II. Materials and Methods: From January 2014 to May 2015, men between 40 to 70 years with ED, and without any known risk factors for endothelial dysfunction were enrolled. Fifty age matched healthy volunteers served as controls. ED in cases was assessed using International Index for Erectile Function score (IIEF-5). Endothelial dysfunction is assessed by flow mediated dilatation (FMD) of brachial artery and serum U-II levels by ELISA kits in both cases and controls. Cases were reevaluated at 4 weeks of tadalafil therapy (10 mg once daily). Results: Sixty one men with a mean age of 47.93 ± 8.84 years suffering from ED for at least 6 months were enrolled. FMD was significantly lower in cases ($+9.42 \pm 11.21$ vs $+13.29 \pm 11.24\%$; $p = 0.04$). Baseline U-II was not different significantly between cases and controls (3524.21 ± 365.26 vs 3511.42 ± 346.81 pg/ml; $p = 0.98$) and this was true across various IIEF sub-groups of cases ($p = 0.32$) except those with LUTS in whom it was significantly higher ($p = 0.03$). Serum U-II had a insignificant positive correlation with IIEF score ($r_2 = +0.12$; $p = 0.36$). After tadalafil therapy, IIEF-5 improved significantly (9.21 ± 3.39 vs 18.5 ± 4.78 ; $p < 0.0001$) and FMD improved insignificantly, ($+9.42 \pm 11.21$ vs $+10.16 \pm 8.56\%$; $p = 0.4$) but there was no significant change in serum U-II after therapy (3538.67 ± 382.53 vs 3567.21 ± 431.5 pg/ml; $p = 0.41$). Conclusions: Serum Urotensin II is neither a marker of erectile dysfunction nor of endothelial dysfunction. It may have a role in ED associated with LUTS, which needs further study.

POD 34 – 03

A prospective study to compare changes in male sexual function following holmium laser enucleation of prostate versus transurethral resection of prostate

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Aim: To Compare Changes in sexual function following HoLEP versus TURP using IIEF-15 Questionnaire. Methods: A prospective study carried out for 2 years from May 2013 to April 2015. All patients with bothersome LUTS due to BPH, who got admitted to the hospital for surgical management were enrolled for the study and they underwent either HoLEP or TURP. Post operatively they were followed for 6 months at 1, 3 and 6 month interval. Statistical testing was conducted with the statistical package for the social science system version SPSS 17.0. Continuous variables are presented as mean \pm SD, and categorical variables are presented as absolute numbers and percentage. The comparison of normally distributed continuous variables between the groups was performed using Student's t test. For within the groups, paired t test was used at 1 month, 3 months and 6 months from baseline. Results: All the 5 domains of sexual function based on IIEF-15 questionnaire remained significantly low at 6 months post-surgery in both the groups. Conclusions: By comparing the changes in sexual function between HoLEP and TURP group at the end of our study (6 months) we found no difference between the groups with regard to erectile function (EF) or overall sexual function as assessed by total IIEF 15 score.

POD 34 – 04

Prevalence of karyotype abnormalities and Y chromosome microdeletions in a cohort of azoospermic north Indian males

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Introduction and Objective: Geographically diverse studies across the world report the incidence of human infertility to be about 15 – 20% of which a little more than 50% can be attribute to male factor. It is estimated that approximately 15-20 million couples in India suffer from infertility. Genetic factors have been implicated in unexplained azoospermia & oligospermia and have a crucial role in about 10% of male infertility. Studies have reported the incidence of Y chromosome microdeletions ranging from 1% to 50% in azoospermic or severely oligospermic males. Variability of human genome across races and geographical locations makes imperative the study of Y chromosome microdeletions and its contribution to male infertility. The study reports prevalence data of karyotyping & Y chromosome microdeletions in north Indian males. Methods: 472 infertile males with azoospermia underwent cytogenetic analysis using standard laboratory methods for karyotyping. PCR based STS marker analysis was performed on 412 samples for detection of microdeletions of Y chromosome. Results: Abnormal karyotype was identified in 25 patients (5.29%) of which 12 patients had 47 XXY karyotype (Klinefelter's syndrome) while 13 were Klinefelter's mosaic. Analysis of Y chromosome microdeletions using PCR based STS marker analysis revealed prevalence of 5.82% of which AZFc deletion was most common. Conclusion: the advent of molecular technique has paved the way for an understanding of human fertility and its genetic determinants. The racial differences and the associated genomic diversity in India call for further research & reporting of the chromosomal contribution to male factor infertility.

POD 34 – 05

Total antioxidant capacity of semen in male infertility

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Aim An imbalance between reactive oxygen species (ROS) generation in sperm and antioxidant capacity of seminal plasma has been linked

to male infertility. The antioxidant power of biological fluids can be evaluated either by measurement of individual antioxidants or total antioxidant capacity (TAC). The aim of this study was to assess TAC levels in seminal plasma of fertile normospermic and infertile abnormospermic male and its correlation with male infertility. Materials and Methods semen samples were collected on the 4th day after 3 days of sex abstinence by masturbation. After complete liquefaction of the semen samples at room temperature, each sample was tested for the physical seminogram parameters According to the WHO guidelines the subjects were grouped into different categories, normozoospermic, oligozoospermic, oligoasthenozoospermic and azoospermic. seminal plasma is isolated and Total Antioxidant capacity was analysed by freshly prepared FRAP reagent and analysed under spectrophotometry and it is correlated with different semen parameters. Results: Semen samples were collected from 15 fertile men (normozoospermic as control) and 30 infertile men (14 severe oligozoospermic, 10 moderate oligozoospermic, 6 azoospermic out of which 13 are oligoasthenozoospermic). With the semen sample TAC levels were measured using FRAP reagent and analysed with spectrophotometry. Mean antioxidant capacity of control group was found to be higher (2.6 ± 0.07) compared to severe oligozoospermic (1.29 ± 0.03), moderate oligozoospermic (1.31 ± 0.03), Azoospermic (1.04 ± 0.03) and oligoasthenozoospermic (1.42 ± 0.04) groups. There is significant p value association (< 0.001) between control and different abnormal semen parameters by using unpaired T test Conclusion: Present study suggested that antioxidant capacity in fertile group is high compared to infertile group and severity of infertility is correlating with TAC values with lowest seen in azoospermic males

POD 34 – 06

Elastography: "Role and comparison with colour doppler in evaluation of Erectile Dysfunction": A pilot study

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In this study, we aimed to determine the role of elastography and its comparison with colour doppler in erectile dysfunction. We performed a standard ED evaluation that included history; a physical exam; and serum glucose, testosterone, and prolactin levels. We then excluded Patient with history of pelvic surgery/trauma, diagnosed case of stricture urethra, LUTS, presence of neurological disease, peyronies disease, and hypogonadism. Total of 120 patient including case and control underwent study were grouped into 20-40 and 40-60 yrs age. All patient underwent pharmacologic colour doppler, elastography and finally erection hardness grading. Result of above test in cases were compared with control group in both age. Statistical analysis of variables done using student 't' test and difference were considered significant at p value < 0.05 . The average peak systolic velocity in 20-40 yrs ED (+) and ED (-) was 82.11 cm/sec and 83.61 cm/sec respectively and in 40-60 yrs ED (+) and ED (-) was 68.1 cm/sec and 73.61 cm/sec but difference was not statistically significant. The resistive index of 20-40 yrs ED (+) and ED (-) patient was 1.1 and 40-60 yrs ED (+) and ED (-) was 1.0 but difference was not statistically significant. On performing elastography, strain ratio of 20-40 yrs ED (+) and ED (-) was 1.3 and 0.7 and 40-60 yrs ED (+) and ED (-) was 1.5 and 1.0 but difference was statistically significant. Final comparison of erection hardness score was 3.5 and 3.3 in ED (+) and 4.0 in ED (-) patient in both age group and result was found statistically significant. Result of Doppler, elastography and erection hardness score was compared in both age ED (+) patient. 10% patient have abnormal doppler, 30% have abnormal elastography and 30% have abnormal EHS in 20-40 yrs ED (+) patient whereas in 40-60 yrs ED (+) patient 16.66% have abnormal doppler and 50% have abnormal elastography and 46.66% have EHS. Among doppler diagnosed ED cases 90% having psychogenic ED in 20-40 yrs age and 83.33% were having psychogenic ED in 40-60 yrs age. On applying elastography in psychogenic ED cases, 24% and 44% have abnormal cavernosal tissue in 24-40 yrs ED (+) and 40-60 yrs ED (+) cases respectively. Where as in vasculogenic ED cases all patient have abnormal elastography and erection hardness score. Thus all patient with diagnosis of psychogenic ED on colour Doppler should be considered for elastography to look for cavernosal tissue abnormality before treating them as psychogenic ED and these patient are potential candidate for penile prosthesis surgery. Key words: Elastography, impotence, colour Doppler and erection hardness score.

Podium Session 35: UROLITHIASIS - 7

POD 35 – 01

Use of flexible mini nephroscope during mini Percutaneous nephrolithotomy: A pilot study

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Objective: Percutaneous nephrolithotomy is an invasive process and the number of tracts made during surgery for stone clearance can have a direct impact on the morbidity of the procedure. Limiting the number of tracts has the potential of decreasing the complication rates. We present the initial results of use of a novel mini-flexible nephroscope in PCNL for improving clearance and accessing multiple stones through a single tract, and aim to establish the feasibility and safety of this new technique. Methods: A retrospective study of the records of patients with multiple kidney stones in different calices, individual stone size not exceeding 1.5 cm in largest dimension was performed. All these patients underwent a mini PCNL (tract size of 15 Fr). Following clearance of the target stone containing calyx with rigid 12 Fr mini-nephroscope, the flexible mini-nephroscope was introduced through the same sheath and all inaccessible calices were inspected and all fragments were cleared. Total operating time, stone clearance rates, postoperative pain, morbidity, hospital stay, time to recovery and complication rates were recorded. Results: A total of twenty patients were included in the study. The mean operating time was 38.0 ± 11.7 minutes. All patients had complete fragmentation and clearance of stones. Postoperative pain and analgesia requirement in these patients was minimal. There were no significant complications. The average hospital stay was 21.4 ± 3.2 hours. Conclusion: Our study indicates that flexible mini nephroscope is an effective adjuvant to mini PCNL in selected stone population.

POD 35 – 02

Composition of urinary stones in Northwestern Rajasthan: Using FTIR spectroscopy

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Introduction: Urolithiasis is a major cause of morbidity worldwide. Stone analysis is an important part in the evaluation of patients having stone disease. The aim of this study was to evaluate the spectrum of chemical composition of urinary stone in Northwestern Rajasthan using Fourier's transform infrared (FTIR) spectroscopy. Materials and Methods: This was a prospective study conducted on 1036 urolithiasis patients attended our institute from September 2012 to July 2015. The structural analysis of the stones was done using FTIR spectroscopy. Results: Out of 1036 patients, stone analysis was done in 608 cases. Mean age of the patients was 32.3 years (Range 9-72 years). Four hundred stones were renal, 126 ureteric and 82 were urinary bladder stones. Calcium oxalate stone was most predominant (76.81%). Among these 78.59% have predominantly calcium oxalate monohydrate and 21.41% have predominantly calcium oxalate dihydrate composition. Twenty-six (4.28%), eleven (1.81%) and two (0.32%) stones were struvite, uric acid and cystine respectively. The remaining 16.78% were mixed stones (calcium oxalate + calcium phosphate, calcium oxalate + uric acid). Renal, ureteric and urinary bladder stones were calcium oxalate containing stones in 84.25%, 77.78% and 39.03% respectively. A total of 80.95% (34 out of 42) of staghorn calculi were of oxalates. Conclusion: Calcium oxalate was the most predominant chemical composition in stones of 608 patients (76.81%) followed by mixed, struvite, uric acid and cystine stones. This data from our study can guide further studies to find the underlying causes for these stones and hence interventions to reduce the incidence of urinary stones.

POD 35 – 03

Tadalafil versus tamsulosin versus combination of both as medical expulsive therapy for lower ureteric stones: A randomized trial

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Introduction and Objective: To compare the efficacy of tadalafil versus tamsulosin versus combination of both as medical expulsive therapy for lower ureteric stones. **Methods:** All the patients presenting to our institution between January 2014 to June 2015 with distal ureteric calculi (<7 mm) were randomised equally into three groups for medical expulsive therapy. Group A received Tadalafil, Group B received Tamsulosin and Group C received combination of Tadalafil and Tamsulosin for a maximum of 6 weeks. Stone expulsion time, analgesic use, number of hospital visits for pain, endoscopic treatment and adverse effects of drugs were noted. **Statistical analyses** were carried out SPSS software. **Results:** There was a statistically significant higher expulsion rate in group C compared to group A/group B (81%; P-value = 0.031) and a shorter time to expulsion (14.9 ± 4.4 days; P-value = 0.003). Differences were noted in terms of number of hospital visits and analgesic requirement in favour of group C, but were not statistically significant. There was no serious adverse event. An improvement in erectile function was noted in patients of group A and group C. **Conclusions:** Medical expulsive therapy for distal ureteric stones using tadalafil is safe, well tolerated. It is less efficacious than Tamsulosin when used alone, but is more efficacious when used in combination with Tamsulosin. Moreover, tadalafil has additional advantage of improving erectile dysfunction when this condition coexists with a lower ureteric stone.

POD 35 – 04

Role of retrograde intrarenal surgery in management of renal stones: 2 year experience

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Introduction and Objective: Retrograde Intrarenal Surgery (RIRS) is considered as a minimally invasive procedure for management of renal stones with minimal morbidity. Our objective is to demonstrate its effectiveness in management of large, multiple and staghorn stones. **Methods:** A prospective study was done of 160 patients with renal and upper ureteric stones who were managed with RIRS. Out of 160 patients, 49 patients had single stone and 111 patients had multiple stones. **Results:** Out of 160 patients, 108 patients were males and 52 were females. Out of 160 patients, 15 patients were pre stented in view of septicaemia or renal impairment. Out of 160 patients, 28 patients had renal impairment at the time of presentation, which improved in all patients and return to normal value in 24 patients. Out of 160 patients, 52 patients underwent B/L RIRS and 102 underwent U/L RIRS. 26 patients had stone size <1 cm., 53 patients had 1-2 cm. and 81 patients had more than 2 cm. 4 patients had residual stones out of which, 2 patients underwent URS, 1 patient underwent RIRS and 1 patient underwent ESWL. **Conclusion:** RIRS is feasible in large stone burden like partial and complete staghorn with minimal morbidity. Our study demonstrate its effectiveness in large stone burden (size >2 cm.), with additional procedure required in <3% patients.

POD 35 – 05

One or two 24 hour urinary collections in metabolic evaluation of recurrent urolithiasis: Does it make any difference?

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Introduction: Urolithiasis has a lifetime recurrence rate of 80%. Studies have shown that patients are interested in knowing reason for stone disease and the ways to prevent recurrences. Metabolic Evaluation in western countries have shown at least one identifiable and treatable abnormality in more than 90% patients. Twenty Four hour urinary collection and examination are essential part of metabolic evaluation. Most authorities and guidelines recommend that two or more 24 hour Urine specimens need to be collected and analysed. 24 hour urine collections are usually very cumbersome for the patients. Many Clinicians and patients question the need for more than one 24 hour urinary examination. To answer this question we conducted protocol based evaluation for recurrent urolithiasis patients who presented to our Hospital and consented to be part of study.

Two 24 hour Urine samples were collected and data was analysed to find whether or not two 24 hour urine samples offer any advantage over single 24 hour urinary examination. **Aim:** To Study various metabolic abnormalities in patients with Recurrent Urolithiasis and to find whether or not two 24 hour urine samples offer any advantage over single 24 hour urinary examination. **Materials and Methods:** We recruited all the consecutive consenting patients presenting with recurrent urolithiasis at our Hospital. Blood parameters assessed were CBP, Serum Glucose, Serum Sodium, Serum Potassium, Serum Chloride, Urea, Creatinine, Serum Calcium, Serum Phosphorus. 24 Hour urine was analysed twice for Volume, pH, Osmolality, Calcium, Oxalate, Phosphate, Sodium, Potassium, Creatinine, Uric acid, Citrate, C/S. & CUE. We compared results from first 24 hour urine analysis and 2nd time 24 hour Urinary specimen analysis to find out whether two 24 hour urinary collections are detecting more abnormalities than single 24 hour Urinary collection. **Results:** In total 45 patients participated in study. All patients had at least one metabolic abnormality in either first or second 24 hour urine analysis. Overall 153 abnormalities were detected in 45 patients. First 24 hour Urinary Sample examination was able to detect 83% (127) abnormalities. Second 24 hour urinary sample Examination was able to detect 69.99% (107) abnormalities. Thus if only one sample was examined then there was a chance of missing 17%-30% of the abnormalities in Urine Parameter. **Conclusion:** Our protocol-based metabolic evaluation reveals high prevalence of metabolic abnormalities in recurrent stone formers, and hence proposes that this protocol may be applied in routine clinical practice. Since there are high chances of missing some abnormality or other in single 24 hour Urine examination we recommend at least two 24 hour Urinary Collections.

POD 35 – 06

Residual calculus in PCNL tract: A rare cause of chronic discharging sinus

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Introduction: The Current guidelines of the European Association of Urology recommend PCNL as the treatment of choice for stones larger than 2 cm and lower polar stones larger than 1 cm in patients with unfavourable factors for SWL. Most studies showed that stone free rate after PCNL ranges from 40% to 90% depending on the size, number, composition, nature of the stone and also surgeon's experience. Incidence of residual stones after PCNL ranges from 10% to 60%. **Case report** We present a case of a 48 years old female patient who presented with a discharging sinus at the left flank region since one and a half year. She underwent PCNL for left renal calculus elsewhere two years back. Examination revealed a chronic sinus discharging clear fluid. Renal parameters were normal. Ultrasound showed contracted right kidney with reduced cortical thickness. X ray KUB and CECT KUB was suggestive of a residual calculus (1 cm) in the right PCNL tract. CECT KUB also showed the left kidney to be non functioning. Left nephrectomy was done with excision of the sinus tract. **Conclusion** Residual fragments are frequent after PCNL. Detection depends on quality of imaging. Any remaining fragment should be treated. Treatment depends on size and location. Residual calculus in the PCNL tract is a very rare location for a residual calculus to occur and also is a rare cause for a discharging sinus post PCNL.

Video Session 1

VID 01 – 01

Robot assisted laparoscopic excision of organ Zuckerkandl

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Introduction: Organ of Zuckerkandl lesion may present either as functional tumour (pheochromocytoma) or as a non functioning tumour (paraganglionoma). To our knowledge we are reporting for the first time, robot assisted excision of functioning Organ of Zuckerkandl. **Case Report:** 32 year old medical professional presented with uncontrolled hypertension. On evaluation she was found to have functioning Organ of Zuckerkandl with normal adrenals. Urinary Normetanephrine levels were elevated. After

adequate preparation robot assisted excision of the lesion was performed with preoperative beta and alpha blockade. The surgery itself was performed using surgical robot with the patient on the lateral position (kidney position). 4 port approach was under taken. The organ of Zuckerkindl was identified and isolated. Three feeding vessels from aorta was identified and secured with hemolock clips. Post operatively patient recovered in an ICU setting over night. She made smooth post operative recovery with complete normalisation of blood pressure. Conclusion: Excision of such complex, paraaortic lesion could be done safely. To our knowledge this is the first time in the literature were robot assisted excision of organ of Zuckerkindl has reported.

VID 01 – 02

Bipolar transurethral enucleation of prostate

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Introduction: Bipolar Transurethral resection of the prostate (TURP) is an established surgical treatment for symptomatic and obstructing benign prostate enlargement. The technique of Bipolar transurethral enucleation of the prostate (TUEB) is a new technique which replicates the open enucleation of prostatic adenomas in an endoscopic fashion, combining the benefits of complete enucleation and minimally invasive approach to BPE. **Materials, Methods and Technique:** We did 15 cases of TUEB in the last 6 months. We will demonstrate the detailed technique of TUEB in this video. TUEB is performed using the plasmakinetic system, with a standard resectoscope. Using a 26 Fr continuous flow rotating resectoscope with NS as irrigant, Urethra dilated by serial cluttons dilators upto 30 Fr. Gutters created at 5, 7 & 12. 0 clock position, middle lobe & lateral lobes were dissected off the surgical capsule in a retrograde fashion from the apex towards the bladder neck using enucleation with TUEB loop. The enucleated lobes were devascularized simultaneously but still attached at the bladder neck by a narrow pedicle (mushroom technique) & then they were resected into smaller prostatic chips or completely detaching from the bladder neck, placing the gland in the bladder & morcellating with Morcellator. **Results:** A Representative of 2 Pts was taken who underwent TUEB & resection in 1 Pt & Morcellation in 1 Pt. A resection time which was measured from the insertion to removal of resectoscope was 90 min, Immediate post operatively, there was mild hematuria, irrigation was stopped on 1st POD. Post operative Hb & PCV at 6 hrs & at 24 hours after surgery was done with drop in Hb by 0.6 gm/dl. PUC removal was done on 3rd POD, both the pts had good flow of urine. post op UFR, PVR was done, Post op USG abdomen was normal limits, no Residual Adenoma, Duration of Hospital Stay was 5 days. **Conclusion:** The bipolar transurethral mechanical enucleation and resection of the prostate has proven to be an effective modification of the resection technique in BPH. It showed a minimal intra-operative blood loss, decreased operative time and complete removal of adenoma.

VID 01 – 03

Laparoscopic transvesical adenomectomy for large volume benign prostate

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Introduction: The aim of the presentation is to demonstrate the technique of laparoscopic simple prostatectomy (SP) for a large benign prostate. **Methods:** Fifty five year old male presented with acute urinary retention. On evaluation, he was found to have very 270 grams prostate with huge medial lobe. Patient was taken up for laparoscopic simple prostatectomy. Three ports were used (Two 10 mm and one 5 mm). Transperitoneal transvesical approach was used to enucleate the prostate adenoma which was removed through suprapubic incision. Bladder was closed over per-urethral and supra-pubic catheters with a transperitoneal drain. **Results:** Operative duration was 210 minutes and the blood loss was 800 ml and there was no intra-operative complication. Patient was started orally after 6 hours and he tolerated normal diet from postoperative day (POD) one. The drain was removed on 2nd POD. Patient was fit for discharge on POD 4. There was no wound infection or urinary tract infection. Voiding trial was successful on POD 7 and he was continent. Post op Uroflowmetry showed Qmax >30 ml/sec and the post-void residual urine was insignificant. Histopathology showed benign adenomatous hyperplasia. **Conclusion:** Laparoscopic simple prostatectomy is a feasible and safe minimally invasive surgical option for

managing very high volume prostate adenoma, particularly in urology centers where expertise and equipment for endoscopic enucleation are not available.

VID 01 – 04

Laparoscopic deroofing and marsupialisation of symptomatic bilateral renal lymphangiectasia

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Case Report: A 18 year old female was referred to our center with complaints of bilateral loin pain since 6 months. On examination her blood pressure was 180/110 and nontender mass palpable in the both lumbar region. Computed tomography scan of abdomen showed bilateral perirenal hypodense multiloculated collection. She underwent laparoscopic deroofing and marsupialization of the perirenal collection on either side. The patient made a complete recovery, normal blood pressure without antihypertensive medication. **Discussion:** Renal lymphangiectasia is a rare disorder; there are about 50 reported cases. Pathogenesis is hypothesized to result from developmental malformation of the renal lymphatic tissues leading to obstruction and accumulation of lymph in the parenchyma, the subcapsular region and the hilum. Diagnosis is usually done on imaging ultrasound, CT or magnetic resonance imaging. The patient was symptomatic and considering her age, possibility of exacerbation during pregnancy and recurrence after aspiration it was decided to proceed with laparoscopic deroofing and marsupialization. In our case, bilateral perinephric collection was probably compressing kidneys. In addition, our patient's blood pressure normalized rapidly after drainage and definitely after surgery, suggesting hypertension secondary to renal compression. **Conclusion:** Renal lymphangiectasia remains an elusive disorder as most of the knowledge comes from case reports, given its rare occurrence. We presented one of the rare cases of symptomatic renal lymphangiectasia associated with hypertension, where symptoms and high blood pressure resolved shortly after laparoscopic marsupialization.

VID 01 – 05

Application of seminal vesiculoscopy in urology

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Aim: Application of seminal vesiculoscopy in urology. **Methods:** we have used the routine 7/6.5 mm ureteroscope for seminal vesiculoscopy for patients presenting with complain of azoospermia, haematospermia, LUTS. We have treated patients having obstructive azoospermia, seminal vesicle growth, ejaculatory duct calcification and even GUTB. I will be showing how a scopy of seminal vesicle can treat and even change the plan of management.

VID 01 – 06

Insertion of TVT exacta tape after removal of failed TOT abbrevio tape

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A 41 year old female presented to us with symptoms of pure stress urinary incontinence. She had a TOT abbrevio procedure done 2 yrs ago which was not successful. She was currently using 2 pads a day which would get soaked. A Urodynamic study revealed a stable and compliant urinary bladder with a leak point pressure of 120 mm of water. She was offered a TVT exacta procedure. We present a video in which we show the earlier TOT tape being taken down at the level of the Urethra and a TVT exacta procedure being done. The patient is dry and does not need any pads.

VID 01 – 07

Laparoscopic sacrocolpopexy and perineorapphy for treating high grade pelvic organ prolapse

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Introduction: Aim of the presentation is step by step demonstration of Laparoscopic Sacro-Colpo Pexy using custom made mesh for pelvic organ prolapse. **Methods:** Forty eight years old female presented with mass descending per-vaginum for 6 months following laparoscopic hysterectomy. On examination she was found to have high grade vaginal vault prolapse associated with cystocele, rectocele and enterocele. She also had patulous vagina. After preoperative work-up patient was taken for Laparoscopic sacrocolpopexy and Perineorraphy. Three ports were used (two 10 mm and one 5 mm). After dissecting the vagina anteriorly and posteriorly till the pelvic floor, Y-shaped custom made mesh was used to fix the vaginal vault into sacral promontory. The mesh was retroperitonealized. Perineorraphy was performed to correct patulous vagina. **Results:** Operative duration was 2 and half hours and blood loss was 50 ml. Patient tolerated orally after 6 hours and moved bowel next day. Analgesic requirement was minimal and patient was discharged on 3rd postoperative day. Vagina was optimally narrow, had good depth and there was no prolapse on Valsalva at discharge. **Conclusion:** Combination of Laparoscopic sacrocolpopexy and Perineo-raphe may be considered as optimal management option in case of apical pelvic organ prolapse and patulous vagina. It applies best principles of both approaches resulting in better cosmetic and functional outcome

Video Session 2

VID 02 – 01

Laparoscopic ureteral tailoring and reimplantation: Our technique

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Introduction: Ureteric tailoring and reimplantation is often necessitated in cases of Primary Obstructive Megaureter. Difficulty is encountered during antireflux reconstruction of the neouretero-vesical anastomosis due to the large ureteral diameter. It is rarely done laparoscopically. We describe our technique of laparoscopic ureteral tailoring and reimplantation. **Technique** After obtaining optimal 4-port peritoneal access, the ureter is dissected and mobilized distally upto the urinary bladder. It is not necessary to strip the peritoneum off the anterior surface of the grossly dilated ureter. Care is also taken to preserve the adventitia of the mobilized ureter and the distal ureteral blood supply arising from the internal iliac branches. The ureter is disconnected between clamps as close to the bladder as possible. The ureter is subsequently stabilized and tailored anteriorly to achieve a circumference of around 20 mm as measured by a graduated ureteric catheter. The diameter of the neoureter thus constructed was 7 mm. A detrusor trough of about 35 mm was then created on the antero-lateral aspect of a moderately filled bladder and the neo-ureteral anastomosis was achieved by a modified Lich-Gregoir technique, maintaining the 5:1 ratio for a non-refluxing anastomosis. The anastomosis was further secured using ipsilateral Psoas-hitching of the bladder. **Conclusion:** Although technically demanding, it is possible to achieve a good anti-refluxing anastomosis in a grossly dilated ureter using laparoscopic tailoring and reimplantation.

VID 02 – 02

A novel "Peritoneal Scaffold" technique of pelvic lymph node dissection

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Introduction: The standard technique of PLND for Urologic malignancies is suboptimal as it entails removal of these lymph-nodes in a piece-meal fashion, requiring multiple attempts at retrieval with the risk of losing bits of lymphatic tissue during dissection and retrieval. It is also difficult to map these lymph-nodes to their respective sites of origin. Our novel technique of Peritoneal Scaffold based PLND negates the afore-mentioned drawbacks of the standard technique. **Technique** PLND is begun by marking a triangular peritoneal scaffold with its apex at the level of ureteral crossing at common-iliac bifurcation and base formed by the vas deferens. The lateral limb of

the triangle is formed by the lateral border of the external iliac artery and the medial limb runs along the ureter and the lateral surface of bladder. The lymphatic tissue is swept medially from the genito-femoral nerve, employing a split-roll technique to sweep it around the iliac vessels. It is then delivered from the obturator fossa and swept upwards towards the peritoneal scaffold. Distally, it is swept from the internal inguinal ring and femoral canal regions. It is then swept off the ureter and bladder, clipping the obliterated umbilical artery and other superficial branches of superior vesical artery. En-bloc retrieval is accomplished thereafter. **Conclusion:** The Peritoneal Scaffold based PLND is a novel technique that has distinct advantages over the traditional PLND technique in facilitating a single en-bloc retrieval of lymph node groups and ensuring orientation and mapping of lymph nodes to their site of origin.

VID 02 – 03

Robot assisted boari flap reconstruction of the lower ureter

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Introduction: Ureteric injury is not uncommon during pelvic surgery, especially when minimally invasive technology is in use. Hysterectomy is one such procedure during which ureters are particularly at risk of various forms of injury. **Materials and Methods:** A forty four years old lady underwent a laparoscopic hysterectomy for multiple fibroids and menorrhagia. during immediate post operative period she developed pain in right flank and fever. she was found to have a gross hydronephro uretero nephrosis and underwent percutaneous nephrostomy. A nephrostogram revealed total block of right ureter below the iliac vessel crossing. At this stage she was referred to us for further management. After discussing with the patient and family all the options, a decision was taken to manage the case using robotic assisted technique. The procedure was done at the end of fourth week post hysterectomy Under general intubated anaesthesia, patient was kept in a flank position with head down by 30 degrees. The robotic ports were placed after pneumoperitoneum with the aim to work in right iliac fossa and pelvis. The Robot was docked from an oblique angle from the foot end and the procedure performed using single docking. The camera used was '30 degrees down' throughout the procedure. The right ureter was traced from the iliac vessels crossing downwards and found entangled in an inflammatory mass just a centimetre distal. The ureter was disentangled and divided at the lowest possible level. Bladder was filled using saline through an indwelling foley catheter to mark out an area on the dome to fashion the Boari Flap. The flap of bladder was raised on the right vesical pedicle and brought close to the cut ureteric end. The anastomosis was carried out using 4/0 braided absorbable suture over a 6 F ureteric DJ stent. **Results:** There was no intraoperative complication, blood loss was minimal and the docking time was recorded to be 2 hours. Patient was allowed orally the same evening and discharged with catheter after 48 hours. The catheter was removed on fifth post operative day. The stent was removed after 2 months and a DTPA scan performed a month later revealed no obstruction in a normally functioning right kidney. **Conclusion:** Robotic assisted minimally invasive procedure can restore ureteric continuity with minimal morbidity

VID 02 – 04

3D laparoscopic pyeloplasty in malrotated kidneys and long segment PUJ obstruction

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Introduction and Objective: Horseshoe kidney is a renal fusion anomaly characterized by renal malrotation, variable blood supply, and high insertion of the ureter. UPJ obstruction (UPJO) occurs in 22% to 37% of ectopic kidneys. Laparoscopic management for UPJO in malrotated kidneys and long segment UPJ is a challenge. We present a video demonstration of 3D Laparoscopic Pyeloplasty in complicated PUJ obstruction. **Methods:** Case 1: A 39 yr/F patient presented with lower abdominal pain. Imaging revealed horseshoe kidney and anteriorly placed PUJ with obstruction. 4 ports were used. Laparoscopic horseshoe kidney Pyeloplasty was done. Case 2: 22 yr/M presented with right flank pain for 1 month. Imaging revealed right

pelvic kidney with PUJ obstruction. Lap Dismembered Pyeloplasty was done. Pelviureteric anastomosis was done with 4-0 vicryl & V lock sutures. Case 3: 33 yr/M had a long segment PUJ obstruction. A wide flap from pelvis was created. The Patient underwent a flap Pyeloplasty. Operative and postoperative details were recorded. Patient was followed up at regular intervals. Results: The mean operative time was 140 min. The blood loss was around 150 ml. Orals was started on the first day, drain removal on the second day. The patients were discharged on the 3rd post op day. DJ Stent removal after 6 weeks. Conclusion: The laparoscopic approach provides all the benefits of minimally invasive procedures to the patient with ectopic kidneys. Laparoscopic dismembered Pyeloplasty, although technically challenging, provides excellent results for complicated UPJO with success rates approaching those of traditional open pyeloplasty.

VID 02 – 05

Laparoscopic repair of urogenital fistula: Our experience

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Introduction: With almost universal availability of safe obstetric practices, most urogenital fistulas presenting nowadays are secondary to various gynecologic surgeries. Most of them are supra-trigonal in location. Laparoscopic repair of VVF is gaining ground as an alternative to open repair of such fistulas. We describe herein a novel technique of laparoscopic urogenital fistula repair involving a limited transverse cystotomy for access and a single-layered barbed suture closure of bladder. **Materials and Methods:** 12 cases of supra-trigonal VVFs and 1 case of Uterovaginal fistula following gynecologic surgeries were taken up for repair by our novel technique. The mean age of the patients was 32 years and the mean VVF size was 1.5 cms. **Results:** The mean operative time was 54 minutes. Estimated mean blood loss was 30 mL and the mean post-operative stay was 2.5 days. None of the patients had any recurrence with a mean follow-up of 14 months. **Conclusion:** The limited transverse cystotomy approach has advantages in decreasing the operative time, improving ease of laparoscopic suturing, allowing an automatic separation of suture lines and allowing for an easier anterior dissection of the bladder to reduce tension on the suture line if necessary. Further this approach provides for excellent results in select patients of supra-trigonal urogenital fistulas in terms of continence and post-operative bladder overactivity.

VID 02 – 06

Zero ischaemic 3D laparoscopic partial nephrectomy

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Introduction and Objective: Laparoscopic approach for Nephron sparing surgery is widely practiced with minimal morbidity. Oncological principle, Organ preservation and maximum comfort to the patient was the aim. Warm ischaemia due to hilar vessels clamping is a concern and we share our technique of laparoscopic partial nephrectomy without clamping the hilar vessels for endophytic incidentally detected lower pole mass. **Methods:** Patient was evaluated with contrast enhanced CT. Bowel preparation was done with Poly ethylene glycol. Aesculap 3D Eienstein vision was used. Transperitoneal 6 port approach was made. Kocherisation of duodenum done and Right kidney and hilar vessels exposed. Intragerotas dissection was done except over the lower pole. Lower pole was clamped with vascular clamp while rest of the kidney was having continuous blood flow. Partial nephrectomy completed with cold scissors with gross negative margin. Calyccorrhaphy and renorrhaphy was done with VLock suture, and covering with gerotas fascia. Specimen retrieved extending working port. **Results:** Operative time was 65 minutes hour with blood loss of less than 50 ml. No blood transfusion given Zero ischaemia maintained through out the procedure. **Conclusion:** Zero ischaemic laparoscopic s partial nephrectomy is technically feasible, safe with good functional outcome and reduced morbidity in selected cases. Global ischemia during partial nephrectomy can be avoided in selected scenarios

VID 02 – 07

Laparoendoscopic single site simple nephrectomy for giant hydronephrosis

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Introduction and Objective: One-port, single-incision laparoscopy has evolved over last few years as a continuum in the development of minimally invasive surgery. Refinement and modification of laparoscopic instrumentation has led to a substantial increase in the use of laparoendoscopic single-site surgery (LESS) in urology. Here we report our experience and assess the feasibility and safety of laparoendoscopic single-site (LESS) simple nephrectomy for giant hydronephrosis. **Methods:** Between August 2011 and August 2015, 16 patients underwent LESS simple nephrectomy for giant hydronephrosis with nonfunctioning kidneys. 3 trocars (one 10 mm and two 5 mm) were placed through periumbilical 3 cm incision. The operation procedure was similar to the conventional laparoscopic nephrectomy. Demographic and operative details were analysed. Mean age was 19.2 years (range 11-35); 9 patients were male and 10 patients had right sided giant hydronephrosis. **Results:** LESS nephrectomy was completed in all patients without conversion to open surgery. The mean operative time was 135.8 (± 51.2) min, and estimated blood loss was 150 (± 84.4) ml. No major intraoperative complications occurred. In the postoperative period 2 patients had wound infection, 1 had subcutaneous emphysema and another developed urosepsis. All 4 patients were managed conservatively. The mean hospital stay was 2 (± 0.8) days. **Conclusions:** Single port simple nephrectomy in selected cases of giant hydronephrosis is feasible with outcome similar to standard laparoscopic nephrectomy with better aesthetic effect and less morbidity.

Video Session 3

VID 03 – 01

"Flipping the Kidney" for posterior approach to renal hilar structures during transperitoneal laparoscopy

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Introduction: It is sometimes difficult to access renal hilar structures anteriorly during transperitoneal laparoscopy. It becomes necessary in such cases to mobilize and 'flip' the kidney to approach the hilum from the posterior aspect. We demonstrate the use of this 'flip' technique during right sided laparoscopic donor nephrectomy and during laparoscopic pyeloplasty with a largely intra-renal pelvis. **Technique:** Case: 1 In a case of laparoscopic right-sided donor nephrectomy, it was difficult to access the renal artery as it was hidden behind a short and wide renal vein. The kidney was mobilized completely on all sides and then 'flipped' medially to expose the hilum from behind. The artery could be reached easily through this posterior hilar dissection and sequential arterial and venous ligation was done. Case 2: In this case, the Pelvi-Ureteric Junction Obstruction (PUJO) was present in a largely intra-renal pelvis and the region of PUJO was anteriorly obscured by the crossing of renal vein and artery. The kidney was mobilized keeping some attachment at the upper pole to prevent a completely floppy kidney and the region of PUJO was approached from the posterior side. The pelvis could be dissected out and a laparoscopic dismembered pyeloplasty completed from this approach. **Conclusion:** It is sometimes difficult to approach renal artery or pelvis anteriorly during transperitoneal laparoscopy and 'flipping' of kidney to allow a posterior approach may help during such difficult scenarios.

VID 03 – 02

3D laparoscopy in ureteric obstruction secondary to endometriosis

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Introduction: Endometriosis is the extrauterine presence of endometrial like tissue. Urinary system involvement occurs in 20% cases (Bladder – 80%, Ureter – 20%). We present a video demonstration of 3D laparoscopic management of ureteric obstruction secondary to endometriosis. **Study Methods:** Case 1: 38 yr female with h/o left dull loin pain for 6 months. Imaging protocol included USG and MRI which revealed 2 large

paraureteric ovarian cyst with obstruction of the left ureter. Three ports were utilised. Ovarian cyst was excised. Upper Ureter was disconnected prior to the stricture level. The stricture segment was excised. An end to end anastomosis over a DJ stent was done. Biopsy was consistent with endometriosis. Case 2: 40 yr female with h/o hysterectomy presented with h/o persistent left loin pain. Imaging revealed left gross Hydronephrosis with an ovarian mass encasing the left ureter. Laparoscopic left nephrectomy, excision of the densely adherent ovarian mass and a colon injury repair was performed. Results: Case 1: The operative time was 150 min. The blood loss was around 190 ml. Orals was started on the first day, drain removal on the second day. The patients were discharged was on the 3rd post op day. There was a colon injury in the second case due to the dense adhesions which was managed laparoscopically. Conclusion: The treatment of deeply infiltrating endometriosis involves some of the most challenging dissections in laparoscopic surgery. Complete surgical excision of endometriosis must be ensured. Minimally invasive management of ureteric obstruction is feasible and easier with a 3 D laparoscopic approach.

VID 03 – 03

Laparoscopic partial nephrectomy for complex renal mass

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Introduction: Partial nephrectomy is standard of care for small renal mass but complex renal masses are still a challenge that can be managed with experienced surgeon in high volume center. Materials and Methods: We have operated 3 cases who presented with dull aching flank pain. USG and CECT revealed 4.7 x 4.7 cm endophytic mass in left upper pole, 5 x 5 cm mass arising from mid pole of left kidney and 9 x 9 cm complex cystic lesion arising from lower pole of left kidney in case 1, 2 and 3 respectively. Localisation done with help of laparoscopic USG. All three patients underwent laparoscopic partial nephrectomy (LPN). Results: Warm ischemia time and RENAL score was 20 min, 23 min, 25 min and 10, 8, 9 respectively in case 1, 2 and 3. Drain removal was on second day and duration of hospital stays was 4 days. There were no specific intraoperative or postoperative complications. The histopathology for case 1 was chromophobe renal cell carcinoma, clear cell carcinoma for case 2 and for case 3 was consistent with cystic renal cell carcinoma and the margins were free in all cases. There was no recurrence on follow up. Conclusions: LPN for complex renal mass may be successfully attempted with no additional procedural morbidity and acceptable long term oncological and functional outcome. Early declamping and renorrhaphy decreases the warm ischemia time.

VID 03 – 04

Robot assisted laparoscopic excision of complete intra renal tumour with intra operative ultrasound guidance

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Introduction: Nephron sparing surgery is now the standard of treatment for small renal masses in order to achieve functional preservation of the kidney without compromising the oncological cure. However complete intra renal tumour would traditionally be excised by a open method in view of the advantage of tactile sensation as well as ability to cool the kidney before attempting the excision. In inaccessible areas such patients may also undergo complete Nephrectomy. Here we describe our experiences of excising the complete intra renal tumours using a surgical robot along with ultrasound guidance. Materials and Methods: 2 patients Between (June 2014 and March 2015) were diagnosed to have complete intra renal tumours on CT evaluation done for non specific abdominal pain. Robotic excision was decided for both the patients after due counselling. Standard robotic approach for partial Nephrectomy (patient on lateral position with five trocars) was deployed. Preoperative CT planning using coronal reconstruction was done for both the patients. Intra-operatively, after complete removal of perinephric fat, intraoperative ultrasound was used to mark the tumour area. After clamping the artery, a disc of renal tissue was removed. The intra renal tumour was excised. The cavity was secured using quill suture and sliding clip renorrhaphy was performed. Both the patient made smooth post operative recovery and no complications were recorded. The final histology of one patient was clear cell RCC Fuhrman grade 2 with clear margins and the

other patient was benign tumour. Conclusion: Robot assisted surgery is a feasible for complete intra renal tumour in experienced hands with minimal complications rates and acceptable clamp time.

VID 03 – 05

Post chemotherapy RPLND: Robotic way (technique and challenges)

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Introduction: Patients with advanced NSGCTs often presents with residual retroperitoneal mass after completion of chemotherapy. Post chemotherapy (PC) RPLND (Retroperitoneal lymph node dissection) constitutes an important part of the multimodality treatment in these patients. Robot assisted PC-RPLND although technically challenging, is safe and feasible in experienced hands. The oncological outcome of PC-RPLND is excellent if all tumors are resected. We present a video on the safety and feasibility of robotic surgery for the excision of residual retroperitoneal lymph node metastasis in patients with non-seminomatous germ cell testicular tumors (NSGCT) post-chemotherapy (PC). Case A 23 years young man with painless right testicular mass for one month underwent right radical orchiectomy. Histopathology showed embryonal cell carcinoma. Post orchiectomy tumor markers were raised. Imaging revealed 1.9 x 1.2 cm retroperitoneal lymph nodes in left paraaortic location with left lung metastasis (clinical stage IIIA). He received 4 cycles of BEP chemotherapy. Patient underwent Robot assisted bilateral RPLND for persistent retroperitoneal mass. The position during surgery was right lateral followed by De-docking and re-docking in left lateral position. Post operative recovery was uneventful. Final histopathology was suggestive of mature teratoma. Conclusion: Post-chemotherapy RPLND plays an important role in the multidisciplinary treatment of advanced testicular cancer. Post chemotherapy RPLND, particularly laparoscopic one, is technically challenging and can be done for a selected group of patients in a high volume centre with adequate laparoscopic expertise. Robot assisted RPLND has better operative advantages than Laparoscopic approach, especially in post chemotherapy setting.

VID 03 – 06

Laparoscopic boari flap reconstruction: Our technique

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Introduction: Boari flap reconstruction is often required in treatment of long ureteral strictures involving mid and upper ureters. Doing such complex reconstructions laparoscopically is technically demanding and the techniques are yet to be standardized. We describe our technique of laparoscopic Boari flap reconstruction. Technique After obtaining optimal 4-port peritoneal access, the ureter is dissected and mobilized distally upto the narrowed segment. Care is also taken to preserve the adventitia of the mobilized ureter and the ureteral blood supply. The ureter is disconnected just proximal to the level of narrowing in the healthy region. The gap between the cut end of the ureter and the point of planned hiatus into bladder is measured using a graduated ureteric catheter. In a partially filled bladder, a Boari flap of the same length is measured and marked on the dome and anterior wall of bladder maintaining a 3:1 length-width ratio. The flap is raised and tubularised and anastomosed to the ureter in a tension free manner. A Psoas hitch of the bladder is done to further relieve the pull on the anastomosis. The flap is further stabilized with intermittent sutures taken to the posterior abdominal wall at regular intervals. Conclusion: Although technically demanding, it is possible to perform a Boari flap reconstruction laparoscopically in long ureteric strictures with good post-operative outcomes.

VID 03 – 07

Laparoscopic donor nephrectomy in patients with abnormal vascular anatomy

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Introduction and Objective: Laparoscopic donor nephrectomy is now commonly performed procedure in most of renal transplantation centers. However, the suitability of laparoscopy for donors with abnormal vascular anatomy is still a subject of debate. **Methods:** All donors were evaluated with preoperative contrast enhanced computerized tomography (CT) with 3 dimensional reconstruction of renal vasculature. Various points noted were number, length and caliber of vessels, type of renal vein anomaly. Case no. 1 had type 2 retroaortic vein. Second patient had circumaortic vein with 3 left renal arteries and right solitary renal artery with 2 renal veins. Third patient had two right renal arteries with two renal veins and two left renal arteries with two retroaortic veins. **Results:** In case no. 1, though the patient had retroaortic vein, length of renal vein was adequate for the anastomosis. Second patient underwent right donor nephrectomy. As patient had two renal veins, small caliber vein was sacrificed. Third patient had two retroaortic veins. Small caliber vein was sacrificed. In all these patients, it was possible to get adequate length of renal vessels through laparoscopic approach with good donor and recipient outcomes. Warm ischemia and cold ischemia time were not prolonged. Mean serum creatinine of recipients at the time of discharge was 1.1 mg/dl. **Conclusion:** Preoperative delineation of venous anatomy using CT angiogram is as important as arterial anatomy. Laparoscopic donor nephrectomy is safe and feasible in patients with abnormal renal vasculature. Video Session 4

VID 04 – 01

Robotic assisted partial nephrectomy for a large renal mass

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Introduction: incidental detection of renal mass lesions of low stage and low grade are on the rise due to radiological imaging of the abdomen due to unrelated presentations. Minimally invasive techniques have been utilised to remove these lesions without sacrificing the kidney. **Materials and Methods:** A young 14 years old girl was diagnosed to have a right renal mass following an ultrasonological examination for pain abdomen. Subsequent investigations indicated a neoplastic mass lesion almost 12 x 10 centimetres involving the upper half of right kidney, pushing the under surface of liver. After detailed discussion with the family about various options, a decision to attempt a robot assisted partial nephrectomy was taken. Under intubated general anaesthesia, robotic ports were placed after creating pneumoperitoneum. Liver was retracted upwards using another 5 mm port in the epigastrium. The renal vessels were dissected and the superior pole of kidney along with the tumour was mobilised all around. The renal vessels were clamped together in a single bulldog and partial nephrectomy carried out. The remnant kidney was sutured in two layers, the medusa using a barbed 3/0 suture and the cortex was repaired using 3/0 vicryl interrupted sutures. **Results:** The patient tolerated surgery very well. console time was 145 minutes and the clamp time was 28 minutes. There was minimal blood loss and patient was allowed orally in next 24 hours. the histopathology was reported as a Renal cell carcinoma with furhman grade 2 with all surgical margins clear. CT scan done 3 months post operatively revealed no evidence of residual/recurrent disease and a normally functioning right renal remnant. **Conclusion:** Robotic assisted partial nephrectomy could be safely and effectively performed in large solitary localised renal masses

VID 04 – 02

Transmesocolic vs standard laparoscopic pyeloplasty: Video presentation

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Laparoscopic management of pelviureteric junction obstruction is well established procedure. In spite of the difficulty in intracorporeal suturing, the technique is widely accepted as regard its outcome is concerned. Transmesocolic approach in PUJO left side is technically different than the standard approach. The surgical video will highlight various aspects of both approaches.

VID 04 – 03

Laparoscopic surgeries in horseshoe kidney: Experience of 4 cases

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Introduction: Laparoscopic surgery in horseshoe kidney (HK) is challenging because of the aberrant vascular anatomy, renal rotation and need to deal with isthmus. We recently operated on four cases of horseshoe kidney disease. Here in, we share our experience and thought on laparoscopy in horseshoe kidney and how it is different from standard laparoscopy. We report our experience in 4 patients. **Methods:** Total of four patients underwent laparoscopic procedure for horseshoe kidney. Three patients underwent laparoscopic heminephrectomy in which two were simple nephrectomy for non functioning kidney and one was radical nephrectomy for renal mass. One patient underwent laparoscopic dismembered pyeloplasty with stone removal. Laparoscopic port were placed little lower down compared to standard port position. CT angiography and urography was done in all the cases to study vascular anatomy and plan the cases. Isthmus was dealt with ligasure and electrocautery in simple nephrectomy cases. In radical nephrectomy patient isthmus was clipped with Weck (hemolock) Clip. Postoperative period was uneventful in all the cases. **Results:** There was no intraoperative complications. The mean operative time was 190 minutes. All the patients were discharged on 4th post operative day. **Conclusion:** Laparoscopic surgery is technically feasible, safe, and reliable for benign & malignant diseases in a HK with mainly three factors posing challenges during the surgery are the abnormal vasculature, division of the isthmus and lower location of the kidney.

VID 04 – 04

Robotic assisted partial nephrectomy

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Introduction: Robotic assisted Laparoscopic partial nephrectomy is increasingly becoming an option in treating patients with small renal masses. The oncological and functional outcomes are almost similar to traditional open partial nephrectomy. We present outcomes of our series of Robotic assisted partial nephrectomies in 10 patients. **Materials and Methods:** A total of 15 Robotic assisted lap partial nephrectomy were done over a period of Jan 2014 to June-2015 were included in the study. Followup period available from 3 months to 1 year. The outcomes of the surgery in terms of margin positive status, renal functional data were obtained from the patient, medical records, radiographic reports. **Results:** Average patient age was 28-64 years and 9 patients were asymptomatic and diagnosed on health check and one patient presented with pain abdomen on presentation. Average tumor size was 3-8 cm. RENAL nephrometry scores ranging from scores 4-8. Average warm ischemia time 20-36 min. No patients had Blood transfusions in the post op period. No patients were stented. Drain was removed on Day 3-Day 4. Foleys with ureteric catheter was removed on POD5. On histopathology clear cell renal cell carcinoma was confirmed in cases 11 and chromophobe and papillary RCC in one patient each and Angiomyolipoma in two patient. Pathological tumor stage was pT1a in 10. Final surgical margin was positive for cancer in 1 patient of having tumour size of 6 cms. No patient with normal baseline serum creatinine undergoing elective robot assisted laparoscopic partial nephrectomy had postoperative chronic renal insufficiency (serum creatinine more than 2 mg/dl). At a median followup of 1 years (range 3 months to 12 months) no distant recurrence or local recurrence (0%) were detected. **Conclusions:** Robot assisted laparoscopic partial nephrectomy is feasible alternative when expertise is available. The oncological and functional outcomes are similar to the open partial nephrectomy. With minimal morbidity and blood loss and easy maneuverability, precise margin clearance.

VID 04 – 05

Laparoscopic radical cystectomy with extra plus intracorporeal neobladder: Point of technique: Video presentation

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Introduction: Whenever Laparoscopic radical cystectomy (LCR) is done for management of carcinoma bladder the incision made for neobladder construction or urethro-vesicle anastomosis takes away the advantage of minimal access surgery. We present our point of technique of LRC with extra plus intra corporeal neobladder construction. **Aims and objectives:** To study the feasibility of Laparoscopy radical cystectomy with extra plus intra corporeal neobladder using a Pfannenstiel incision. **Materials and Methods:** We demonstrate Laparoscopic radical cystectomy with standard lymphnode dissection with extra plus intracorporeal neobladder construction. 57 year old gentleman was diagnosed to have high grade transitional cell carcinoma (TCC), involving the muscularis propria clinical stage T2, N0, M0. Patient was planned for laparoscopic radical cystectomy with neobladder. **Point of technique:** Standard 5 ports for pelvic surgery placed, patient positioned in steep Trendelenburg position. Radical cystectomy with standard lymphadenectomy was done. Pfannenstiel incision about 8 cm was placed to retrieve the specimen and deliver bowel. Stutter pouch created using 54 cm of distal ileum, ureters anastomosed to pouch. The pouch was intraperitonealised and pneumoperitoneum recreated. Pouch oriented with a preplaced stitch at most dependent portion, urethro-neovesical anastomosis done using double-armed Monoderm™ (PGA-PCL) 2-0 sutures. Sutures were taken ambidextrously in continuous fashion over a 20 French silicone perurethral catheter and leak proof anastomosis created. **Results:** Operative time was 312 minutes, with estimated blood loss of 312 cc. Patient had smooth postoperative course and was discharged on 5th postoperative day. Final histopathology report was high grade TCC T2, NO (0/26). **Conclusion:** Laparoscopic radical cystectomy with extra plus intracorporeal neobladder is feasible. Procedure can replicate advantages of minimal access surgery while maintaining oncological efficacy.

VID 04 – 06**Video endoscopic inguinal lymphadenectomy****Shivam Priyadarshi**

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Introduction: In penile cancer, Inguinal lymph node involvement is an important prognostic factor and its dissection allows staging and treatment of inguinal nodal disease. But the standard lymph node dissection has its own morbidity and is associated with complications, such as lymphocele, skin loss and infection. Video Endoscopic Inguinal Lymphadenectomy (VEIL) is a novel approach of dissecting inguinal lymph nodes endoscopically. It duplicates the standard open procedure with less morbidity. We present here our initial experience with critical perioperative assessment. **Materials and Methods:** From August 2014 to June 2015, 5 patients with penile carcinoma who were at high risk for inguinal metastases underwent bilateral inguinal lymphadenectomy. We performed standard lymphadenectomy in 1 limb and video endoscopic inguinal lymphadenectomy on the contralateral side. **Perioperative results and followup data** were compared. **Results:** Mean operative time was 86 and 136 minutes for open and endoscopic surgery, respectively. We noted a decrease in cutaneous complications with video endoscopic inguinal lymphadenectomy and a decreased overall morbidity with this endoscopic technique. The mean number of retrieved and positive lymph nodes were similar for the two techniques. At a mean followup of 8.5 months (range 3 to 15) no signs of recurrence or disease progression were noted. **Conclusions:** Video endoscopic inguinal lymphadenectomy is a safe and feasible technique. These preliminary results suggest that it may decrease postoperative morbidity without compromising oncological control. Future studies should include the bilateral procedure, longer term followup and a greater number of patients.

VID 04 – 07**Robot assisted laparoscopic augmentation cystoplasty****Tyagi V, Chadha S, Pahwa M**

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Introduction: Augmentation Cystoplasty is the treatment of choice for small capacity bladder after failing medical treatment. It is normally

performed by an open approach due to technical complexity. We hereby describe the use of robot in carrying out this procedure. **Materials and Methods:** 40 year old female presented to our department with complaints of frequency, recurrent UTI and dysuria. On further evaluation she was found to have small capacity bladder with bilateral grade 5 reflux. Robot assisted laparoscopic augmentation cystoplasty with ureteric reimplantation was performed using ileum as the bowel patch. **Results:** The operative time for the procedure was 415 minutes including docking and port placement time. Her total blood loss was 78 ml. There were no other intraoperative and postoperative complications. On follow up, her symptoms and her maximum cystometric capacity improved substantially. **Conclusion:** Robotic augmentation cystoplasty is a suitable and feasible option for patients with small contracted bladder. Increasing experience and longer follow up are required to further validate the use of the robot in performance of this procedure.

Video Session 5**VID 05 – 01****Transverse testicular ectopia: Laparoscopic management****Vijay Radhakrishnan, Datson George P, Rana Kumar, George P Abraham**

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Introduction: Transverse testicular ectopia (TTE) is a rare congenital anomaly. It is an aberration in the descent of testes. We report a rare case of crossed ectopic testes and its laparoscopic management, emphasizing on the technique and outcome. **Case Report:** The index patient is a three year old child presented to us with un-descended right testes. After a detailed clinical and ultrasound evaluation, a diagnosis of transverse testicular ectopia was confirmed with both testes on left side. A laparoscopic exploration with standard three port trans-peritoneal approach located the right testes at the deep inguinal ring on the left side. The ectopic testis was dissected and mobilized with the cord structure. The mobilized testis was brought to the right scrotum through a sequentially dilated 30 Fr tract placed trans-cutaneously. The testis then was fixed in a sub-dartos pouch. **Post operative recovery** uneventful. **Discussion:** Transverse testicular ectopia is a rare entity. It needs to be brought down to the ipsilateral hemi-scrotum. With appropriate care to the vas and testicular vessels, Laparoscopic management of such case is safe and technically feasible though challenging.

VID 05 – 02**Technique of re-do posterior anastomotic urethroplasty for failed pelvic fracture urethral distraction defect****Ashish Pardeshi, Vijay Raghoji**

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Introduction: Failure after posterior anastomotic urethroplasty becomes a challenge for the reconstructive urologist and a matter of quality-survival for the patient. We present the technique of re-do posterior anastomotic urethroplasty for failed pelvic fracture urethral distraction defect (PFUDD). **Materials and Methods:** 21 patients between the age group of 17-62 years (Mean 36.25 years) who had immediate failure after first attempt of posterior anastomotic urethroplasty were considered. Patients with multiple failed attempts and long defects were excluded from the study. All patients had a supra-pubic catheter in situ and a repeat RGU + MCUG was done in all cases. **Results** were evaluated on the basis of uroflowmetry and need for instrumentation. **Technique:** The salient features of redo surgery are immaculate dissection, urethral identification and separation upto the peno-scrotal junction, excision of entire scar tissue, urethral division at the obliteration site, inferior pubectomy, check cystoscopy and tension free water tight anastomosis. **Results:** 1 of the 21 patients developed restenosis, which required laser DVIU and had a stable flow of 8 ml/s even after 6 months. All other patients were voiding with an average flow of 11.8 ml/s with the longest follow-up of 2.5 years not requiring any instrumentation. 2 patients developed de novo ED of moderate degree after redo surgery. **Conclusion:** Re-do posterior anastomotic Urethroplasty is a challenging task with a higher failure rate and should be done only by experienced surgeons. Proper technique gives the ultimate results.

VID 05 – 03**Robotic ureteroureterostomy for retrocaval ureter: A single centre experience****Darshan Shah, Mishra SK, Ganpule A, Sabnis RB, Desai MR**

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Introduction and Objective: Retrocaval ureter is a rare condition in which an embryological normal ureter becomes entrapped behind the venacava because of abnormal development of abdominal blood vessels. Aim of this study was to evaluate the feasibility of robotic retrocaval ureter repair. **Methods:** This is a retrospective case series of four patients, who underwent robotic urteroureterostomy for retrocaval ureter at our institute from January 2012 to May 2015. All patients were diagnosed by CT urography and diuretic renography. All patients were operated using Da Vinci® robotic system. Standard four port placement used. Follow up was done using same imaging modalities and relevant data were collected. **Results:** Total four patients, two male and two female were operated. Mean age at presentation was 21.5 ± 5 years. Flank pain was common presenting symptom in all. Mean operative time was 108.2 ± 13.14 minutes. Mean hemoglobin drop was 0.3 ± 0.1 gm%. There was no intra or post operative complication. Drain was not kept in any case. Mean hospital stay was 2.5 ± 0.5 days. On mean follow up of 22 months, all patients were doing well with no symptoms. All patients showed non obstructive drainage on renogram. **Conclusion:** Robotic retrocaval ureter repair is an effective and safe procedure with results equivalent to that of laparoscopic and open retrocaval ureter repair. It is associated with minimal postoperative morbidity and shorter hospital stay. However large prospective studies needed to further validate these data.

VID 05 – 04**Isolated peno-pubic epispadias repair by modified mitchell technique****Gite VA, Bote S, Dharamshi J, Patil SR, Nikose JV, Siddiqui MAKN**

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Introduction: Isolated epispadias defect is present in 10% of epispadias exstrophy complex. **Methods:** 25 yr. Old male presented with abnormal urethral opening on dorsal aspect of penis, with history of repair once in childhood. On examination he had peno-pubic isolated epispadias with adequate urethral plate and minimal chordae. His NCCT abdo-pelvis, MCUG and basic bio chemical investigation found to be normal. **Result:** He was treated by partial penile disassemble technique with restoring satisfactory cosmetic appearance without chordee and adequate stream of urine. Our repair of partial penile disassembly is a simple modification of Mitchell technique for isolated epispadias repair.

VID 05 – 05**Robot assisted boari flap reconstruction with nonrefluxing reimplant****Jamaluddin, Murugesan Anandan, Yadav Rajiv**

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Introduction: Boari flap is the preferred option for management of long segment/proximal ureteric strictures. During the last few years, laparoscopic reconstructive surgery have emerged as a minimally invasive alternative. Due to extensive suturing involved in this procedure, robotic assistance has a potential to improve the quality of reconstruction. We present a video of robot-assisted right ureteral reimplantation with Boari flap. **Materials and Methods:** 57 year old diabetic male was investigated for idiopathic right lower ureteric stricture seen at the level of SI joint. Imaging and diagnostic ureteroscopy (with biopsy) was done to rule out malignancy. Bladder evaluation was done for adequacy of capacity. **Results:** On retrograde pyelogram, a 2 cm stricture was confirmed in lower ureter, just below the level of the sacroiliac joint. On laparoscopy, thick wall ureter with periureteric inflammation was noted in distal ureter starting below the level of common iliac vessel. Frozen section showed no evidence of malignancy. Wide based bladder flap was fashioned and nonrefluxing, tunneled ureteric reimplantation was done with stent placement. Bladder closed in two layers (inner 4-0 PDS, outer 3-0 monocril). Total console

time 118 minutes and estimated blood loss 25 ml. Patient was discharged on postoperative day 3. On follow up after 3 months, the patient was asymptomatic and CT Urography revealed minimal fullness of right pelvicalyceal system and normal drainage on DTPA. **Conclusion:** Robot assisted reconstructive ureteral surgery is an effective, minimally invasive alternative to open surgery.

VID 05 – 06**Robot assisted ureterocalycostomy: A salvage procedure****Mete UK, Bora GS, Sharma AP, Devana SK**

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Introduction: Ureterocalicostomy is a salvage procedure for patients with pelviureteric junction obstruction (PUJO) with intrarenal pelvis or in patients with failed pyeloplasty. We present our technique of robotic ureterocalicostomy in a patient of secondary ureteropelvic junction obstruction who presented to us after a failed endopyelotomy procedure. **Methods:** A 32 year male presented with left flank pain for 1.5 years. He underwent left percutaneous nephrolithotomy and endopyelotomy in 2013. Non contrast computerized tomogram revealed left gross hydronephrosis with intrarenal pelvis. Radionuclide scan showed impaired cortical uptake with a differential function of 21% with obstructive drainage. Therefore, a salvage robot assisted ureterocalicostomy was planned. **Results:** Patient was placed in right lateral position. Ports were placed similar to standard robotic pyeloplasty and robot was docked with three arms. After colon mobilization ureter was identified and traced upto the PUJ. Ureter disconnected from PUJ and PUJ was closed with continuous vicryl suture. Lower pole parenchyma was cut and ureterocalicostomy was done over 4.8 Fr double J (DJ) stent with continuous vicryl suture. Drain was removed on postoperative day 3 (POD) and per urethral catheter was removed on POD 5. Patient was discharged on POD6. DJ stent was removed after 6 weeks and patient doing well and follow up radionuclide scan is planned. **Conclusion:** Robotic assistance is useful alternative to a minimally invasive laparoscopic or open procedure for complex cases such as ureterocalicostomy which needs a higher skill for performing such salvage reconstructive procedures.

VID 05 – 07**Penile reconstruction with penile lengthening for complex curvature correction: A video presentation****Rahangdale PP, Shah R, Lakhe V, Gupta M**

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Introduction and Objective: Penile curvature is a congenital or acquired deformity most obvious during erection. It causes occasional pain or difficulty in penetration during intercourse. Prevalence rate of 4-10% is reported in the absence of hypospadias. Surgical treatment provides better long-term results. Shortening of the penis can be avoided by techniques such as plaque incision and grafting using dermal graft, saphenous vein, tunica vaginalis, bovine pericardium etc. Division of penile suspensory ligament helps lengthening of short penis. The video demonstrates principles of penile reconstruction with penile lengthening surgery and harvesting of various grafts. **Methods:** The surgery was performed on a 21 yr man who presented with penile curvature of 90° ventrally. Patient has history of surgery performed in childhood for curved penis with epispadias. Post procedure he had persistent curvature and was concerned about short penile length. Surgery was performed to correct residual penile curvature and to increase length. **Surgical technique:** (1) Assessment of chordee (2) Penile shaft exposure through infra pubic Z incision (3) Penile lengthening by suspensory ligament division (4) Degloving of penis (5) Mobilisation of urethra (6) Incision of fibrotic tunica (7) Saphenous vein graft harvesting (8) Dermal graft harvesting (9) Bridging tunica gap with graft (10) Closure of incision (11) Compression dressing with foleys in situ. **Results:** Complete correction of ventral curvature was achieved by graft interposition after release of ventral fibrotic albugina, and some penile lengthening was achieved by release of suspensory ligament. **Conclusions:** Surgical correction of congenital and acquired penile curvatures by full-thickness plaque incision and interposition of grafts is successful in treating penile curvatures. The surgeon should be familiar with use of different grafts depending on degree and site of the curvature.

Video Session 6

VID 06 – 01

Is the search for ideal graft for urethral substitution over? Saphenous vein graft urethroplasty: Our initial experience

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Introduction and Objectives: We have started having cumulative data of three decades of usage of OMG which is overwhelmed with evidence of donor site perniciousness and complication. High prevalence of HPV in normal oral mucosa of healthy men has forced the experts to look for other viable alternative. Buoyed by result of an animal study, we evaluated the feasibility and outcome of substitution urethroplasty using saphenous vein graft as onlay patch in anterior urethral strictures. **Materials and Methods:** Patients with diagnosis of stricture greater than 3 cm who were candidate for substitution urethroplasty were included. Patients with history of lower limb ischemia, saphenous vein harvesting, DVT or presence of two separate stricture requiring two grafts were excluded. Venous color Doppler was done to evaluate patency of superficial and deep venous patency. All urethroplasties were done under regional anaesthesia in lithotomy position. Saphenous vein graft was hydrodistended and de-tubularised and everted (endothelium facing outside the lumen) before using as onlay patch. Post operative evaluation was done using IPSS score, uroflowmetry, MCU & RGU. **Results:** we operated 10 such patients and all patients are doing well. we have started harvesting the graft laparoscopically using 3 port technique and none of our patients required any auxiliary procedure with 6 months of average followup. **Conclusion:** saphenous vein graft appears quite lucid and insightful substitution graft material and should be used conventionally.

VID 06 – 02

Tips and tricks to improve neurovascular bundles preservation during robot assisted radical prostatectomy

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Objective: We will demonstrate various tips and tricks, including latest innovations to improve neurovascular bundles preservation and their outcomes during robot assisted radical prostatectomy (RARP). **Materials and Methods:** We have demonstrated our technique of nerve sparing - athermal, early retrograde release, minimization of tension with identification of Landmark artery. We have shown the role of our subjective nerve sparing (NS) regression model in predicting time to recovery of postoperative erectile function after RARP. We have also shown application of a new innovative technology of Near Infrared Fluorescence (NIRF) using Indocyanine Green (ICG) in identifying landmark prostatic artery and improving quality of NS. We have also shown the application of an innovative dehydrated amnion chorion allograft (dHACM) in improving postoperative functional outcomes after RARP. **Results:** The mean time taken for recovery of postoperative potency was significantly lesser in NS grades 4 and 5 vs. grade 0 in subjective NS system. The NIRF with ICG could identify landmark artery in 17/20 (85%) patients during NS RARP. The mean time to continence in dHACM graft group was 1.21 months vs. 1.83 months in non-graft group ($p = 0.033$). The mean time to potency in dHACM graft group was 1.34 months vs. 3.39 months in non-graft group ($p = 0.007$). **Conclusions:** The surgeon's experience and volume are the key determinants in NS RARP. The key principles of NS include athermal, minimal traction, bilateral complete preservation (wherever feasible). The use of these innovations can hasten early return of potency in patients following RARP.

VID 06 – 03

Robotic retroperitoneoscopic adrenalectomy using Da Vinci Xi system

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Introduction: Laparoscopic Adrenalectomy is a standard procedure for adrenal mass of size less than 6 cm. Laparoscopic Adrenalectomy is performed by both transperitoneal and retroperitoneal approach. Retroperitoneoscopy was not possible with earlier versions of Da Vinci robotic system due to technical difficulties in positioning the robotic arms. We are demonstrating the Robotic retroperitoneoscopic adrenalectomy using Da Vinci Xi System which is probably the first case reported in India. **Materials and Methods:** A 25 year female presented with diagnosis right adrenal pheochromocytoma. She was detected to have hypertension during antenatal period and she underwent medical termination of pregnancy because of uncontrolled hypertension. Biochemical evaluation confirmed the diagnosis of pheochromocytoma. MRI showed well defined lesion measuring 4.6 (CC) x 4.3 (Tr) x 3.8 (AP) cm showing T2 hyperintense signals and T1 hypointense signals involving the right suprarenal region abutting the superior surface of right kidney and segment VI of liver. Right robotic retroperitoneoscopic Adrenalectomy was done using 3 ports for robotic arms and a 12 mm port was used for assisting. **Results:** The 3D vision and the extended dexterity of the robotic arm made retroperitoneoscopic adrenalectomy a viable option. Because of better and enhanced imaging retroperitoneal dissection is better. **Conclusion:** Robotic retroperitoneoscopic adrenalectomy should be considered as an option in future. Because of its advantages, in majority of laparoscopic cases use of robotic surgery is explored.

VID 06 – 04

Continence enhancing manoeuvres in robotic radical prostatectomy

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We describe few manoeuvres which can enhance the continence after robotic radical prostatectomy 1. Puboprostatic suspension stitch: Here after ligation of the dorsal vein, the stitch is passed behind prostatic ligament and the hitched to pubic symphysis 2. Bladder neck sparing: prostate is isolated from the bladder and urethra is dissected out and divided. 3. Nerve sparing: nerve sparing is demonstrated and it is found to be have an impact on continence 4. Cold division of dorsal vein: dorsal vein is divided cold without ligation and the controlled after prostatectomy. This enable better visualisation of the apex of prostate and dissection of urethra 5. Posterior reconstruction: posterior plate of Denonvilliers fascia is reconstructed, popularly known as Rocco Stich 6. Reconstruction of endopelvic fascia: the endopelvic fascia is reattached to the bladder after vesicourethral anastomosis.

VID 06 – 05

Salvage pelvic lymphadenectomy: Role in CRPC?

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Introduction: Prostate cancer (CaP) patients with isolated lymph node (LN) relapse after radical prostatectomy, may represent a distinct group of patients with a more favorable outcome than visceral or bone metastases. Beneficial impact of salvage LN dissection (SLND) on survival in these patients has been documented and SLND may have a role in patients progressing to CRPC and lymph node only metastases. **Materials and Methods:** Our index case is a 65 yrs old gentleman who underwent open radical prostatectomy 10 years back for a clinically localized CaP with PSA 8.47 ng/ml. The final histopathology was gleason 3 + 4 with LN negative disease. Patient had biochemical recurrence two years postoperatively and MRI showed soft tissue lesion in the pelvis. ADT and later RT led to PSA response, however eventually disease progressed to CRPC. Abiraterone failed after nine months with PSA rise and bilateral PSMA avid pelvic lymph nodes on PSMA PET. In view of good performance status and disease focus only in pelvic lymph nodes, patient was offered bilateral SLND. **Results:** SLND was successfully completed with total operative duration of 240 min and blood loss of 100 ml. On histopathology total of 23 nodes were identified with 2 right external iliac nodes positive for tumor metastasis. Post operative PSA was <0.2 ng/ml at one month. PSA at 6 months is 0.98 ng/ml with left lower limb lymphedema. **Conclusion:**

The current data suggest that SLND represents an option in patients with disease relapse limited to the LNs after RP which can further delay the adjunctive treatment.

VID 06 – 06

Noticed or unnoticed tumor violation while doing partial nephrectomy: Does it affect the outcome in terms of recurrence?

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Introduction: Tumor violation could go unnoticed due to bleeding, learning curve and hurried resection. This video demonstrates importance of proper hemostasis and the outcome of revision of a violated tumor plane. **Methods:** Video highlights importance of visualizing “donut” of normal parenchyma at the periphery and glistening white pseudo capsule at the center of the tumor to get a negative margin. Of total 33 cases done laparoscopic ally, tumor violation was noted in 4 cases. Two cases with tumors of 5 and 5.5 cm size each had radical nephrectomy and in rest two, revision of dissecting plane was done. Outcome was compared with 2 unnoticed violation diagnosed on final histopathology as positive margin. A cold scissors was used to resect the tumor. Frozen section analysis was not done in any case. **Results:** Mean warm ischemia time was 18 ± 4 minutes. Estimated blood loss was $400 \text{ ml} \pm 120 \text{ ml}$. Of 2 patients with revision dissection plane, margins were negative on final histology. Both were doing fine at 28 and 18 months of follow up. Of 29 patients where no tumor violation was noticed, 2 had focal positive margin. One patient had oncocytoma and other, who had clear cell renal cell carcinoma recurred at the local site after 9 months for which radical nephrectomy was done. **Conclusions:** Maintaining a bloodless field with hilar clamping and use of cold scissor may visualize the tumor violation and revision of dissecting plane may not influence the outcome in terms of local recurrence.

VID 06 – 07

Robotic right heminephrectomy for renal cell carcinoma in horseshoe kidney: Video demonstration

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Introduction: Horseshoe kidney is the most common renal fusion anomaly and abnormal vasculature makes surgery challenging. To date, there have been few reports of renal cell carcinomas excised from horseshoe kidneys using the robotic approach. We report a case of robotic heminephrectomy for a right renal tumor in a horseshoe kidney along with surgical steps in the video. **Materials and Methods:** A 70 yr old male presented with complaints of mild abdominal pain. Contrast enhanced computed tomography (CT) scan of abdomen and pelvis revealed horseshoe kidney with $5 \times 4 \text{ cms}$ enhancing mass situated on upper pole of right moiety with perinephric hematoma. CT angiography showed distinct two arteries and two veins supplying the tumor region directly from aorta and inferior vena cava respectively. After counselling, patient elected to undergo transperitoneal robotic radical heminephrectomy. **Results:** Surgery was uneventful and total console time was 100 mts and blood loss was 50 ml. Hospital stay was 3 days and there were no intra or post operative complications. All individual arteries and veins were dissected individually and ligated and isthmusectomy was performed. Frozen sections of the tissue confirmed tumor-free borders. Pathology revealed a pT1NOM0 grade 3 clear cell carcinoma of the kidney with free surgical margins. Following an 8-month follow-up, there was no disease relapse. **Conclusions:** In conclusion, in the management of horseshoe kidneys with renal cell carcinoma, robotic heminephrectomy has been demonstrated to be a valuable alternative treatment and is safe with all the advantages of minimally invasive procedure.

MODERATED POSTER SESSION – 1

MOD 01 – 01

Adrenal lesions case series: Single center experience

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Introduction: Adrenal lesions are less commonly encountered in clinical practice with varied clinical presentation. They may be functional/non-functional and noted incidentally when investigating for other problems. Hence we present the case series of six different cases presented to our institution in two years and review the literature. **Materials and Methods:** This is a retrospective study from June 2013 to June 2015. A total of six cases of adrenal lesions were encountered. Their clinical presentation and investigations were recorded and analyzed. 5 had open adrenalectomy and one laparoscopic adrenalectomy. Out of this, three were pheochromocytoma (50%), one myelolipoma (16%), one Cushing's disease (16%), one adenoma with paraganglioma (16%). One pheochromocytoma presented with negative symptoms, positive in blood investigations but negative on MIBG scan. **Conclusion:** Adrenal lesions are rare in clinical practice. One should be aware of varied clinical presentations with knowledge of rarer sub-types of adrenal lesions and their management

MOD 01 – 02

Primary adrenal tumors: Five years single centre experience

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Introduction: Primary adrenal tumors are very rare. They may be functional/non-functional and diagnosed incidentally. We present our experience on adrenal tumors over last five years to document their clinical, biochemical and pathological presentations and follow-up. **Methods:** Retrospective record review from 2010 to 2015. **Results:** Out of 14056 urologic surgeries done from 2010–15, only 12 (0.085%) patients had adrenal tumors needing adrenalectomy with median (IQR) age of 38.5 (9) years and 7 were females (58.3%). Majority (9; 75%) presented with symptoms. One patient had incidentaloma (1/12; 8.3%). On histopathology, Pheochromocytoma was the commonest tumor noted in 7/12 patients (58.3%) followed by Adrenal adenoma in 2 (16.6%), Myelolipoma, Schwanoma and Adrenocortical carcinoma with virilisation in one each (33%). Seven (58.3%) had left sided involvement and 9 (75%) had secondary hypertension, all of which resolved with adrenalectomy. Median tumor size was 5.55 (2) cm. Laparoscopic adrenalectomy was done in 8 (66.6%) and open in 4 (33.4%) patients. The median operative time was 205 (35) minutes and postoperative length of hospitalization was 10.5 (3) days. Elevated VMA/metanephrines were seen in 6 (58.3%) patients and 3 had Cushing syndrome (hyper-cortisolism). All patients are doing well over a mean follow up of 3–5 years without recurrence. **Conclusion:** Adrenal tumors are extremely rare and need high index of suspicion. Functional tumors present early and adrenalectomy is curative in most patients. Long term follow-up is essential. They have good prognosis with early diagnosis aided by imaging and adrenalectomy with good perioperative care.

MOD 01 – 03

Study of 22 consecutive cases of fracture penis at Goa Medical College

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Introduction and Aim: Penile fracture is the disruption of tunica albuginea with rupture of corpora cavernosa, most commonly sustained during vigorous sexual intercourse or masturbation. Prompt exploration and surgical repair results in faster recovery, decrease morbidity and lower complication rate with avoidance of erectile dysfunction. Penile fracture is a urological emergency that may have devastating physiological/psychological consequences. Our aim was to study clinical presentation, time of reporting to hospital and management with regards to outcome, in patients with penile fracture. **Materials and Methods:** 22 Consecutive cases of fracture penis from April'08 to April'15 were included in this study. **Result:** All 22 cases were surgically explored. 14 patients reported to hospital within 6 hrs, 7 within 24 hrs and 1 after 24 hrs. 12 patients sustained injury during masturbation, 9 during sexual intercourse and one had accidental fall on erect penis. None had urethral injuries. On exploration, all patients had unilateral corporal injury. Tears were repaired with continuous 3–0 absorbable sutures. At 6 months, 14 patients had

preserved erectile function (IIEF score 65-72), 2 patients had erectile dysfunction (IIEF score 42 and 45) while 6 were lost for follow up. Conclusion: Diagnosis of penile fracture can usually be made solely on clinical grounds. Ultrasonography is a good radiological adjunct. Early surgical intervention is mandatory to achieve good cosmetic & functional results with preservation of erectile function. Sex education policy should include information regarding fracture penis & injuries to genital organs, because those affected are often reluctant to report early, due to embarrassment

MOD 01 – 04

To know the prevalence of early onset andropause in patients coming to our OPD

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Introduction and Objectives: Andropause is a clinical and biochemical syndrome is a common disorder associated with advancing age is often under diagnosed and often untreated. Andropausal men usually have a responsible profession and are at their peak of their carriers, but health and psychological problems hinder the goals of these population and dissatisfaction and emotional disturbance. Reported prevalence of hypogonadism was 3.1-7% in men aged 40 to 69 years, 18.4% above 70 years. Risk factors for LOH is chronic illness like DM, Metabolic syndrome, COPD, Renal disease, inflammatory arthritis, HIV. Method of study: This is a prospective study in general patients coming to vims opd of surgery, medicine, psychiatry departments ballari from Jan 2015 to Dec 2015. Age, Comorbidities, Testosterone levels, Symptoms and sign were recorded, ADAM questionnaire were put to all pt enrolling to study pt who has underwent vasectomy and orchidectomy were excluded from study. Testosterone level less than 300 ng/dl is taken as cut off point for diagnosis of hypogonadism and different age groups also noted along with associated comorbid condition and their relevance in this condition. Results: This is ongoing study, results will be available at the end of December. Conclusions: The prevalence of andropause in general population seems to be changing to the early age i.e around 5th to 6th decade. Identifying and treating this group of population is a necessity. Hence treating this group of patients will improve their lifestyles and productivity.

MOD 01 – 05

Potency outcome after repair of fracture penis

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Introduction: Penile fracture is the disruption of the tunica albuginea with rupture of the corpus cavernosum. Fracture typically occurs during vigorous sexual intercourse, trauma to erect penis. The aim of our study to assess the potency outcome after surgical repair of fracture penis. Materials and Methods: We studied 18 patients aged between of 20-42 years attending dept. of Urology from 2005 to 2015. The cause of fracture were improper handling of erect penis in 6 patients, fall on an erected penis in 7 patients and vigorous sexual intercourse in 5 patients. Duration of presentation ranged from <12 hours to >6 days. Intra operatively tunica albugenia and corpora cavernosa were found to be ruptured on the right posterior-medial aspect in 11 patients and left posterior-medial aspect in 7 patients. 1 patient had associated with urethral injury. Follow up was done at 4 weeks and 3 months. Followup ranged from 4 months to 14 months. Results: At 1 month follow-up 16 patients had morning erection. No patients had voiding difficulty, 16-patients had fibrous nodule at repair site, All patients underwent USG doppler of penis. 16 patient had normal baseline monophasic flow in cavernous arteries, no abnormal vascularity in B/L corpora cavernosa. At 3 months 5 patients lost to follow-up. All the remaining 13 patients had morning erection with no ED in 11/13 (84.61%) patients, mild ED in 1/13 (7.69%) patients and moderate ED in 1/13 (7.69%) patients. Conclusion: Penile fracture is not that uncommon. But the crux of the situation is early and appropriate repair. This will reduce the morbidity and lower the complication like penile curvature. Further this will help in preserving the potency in such cases to a great extent.

MOD 01 – 06

Erectile function following repair of penile fracture

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Introduction and Objective: Penile fracture is an uncommon condition defined as disruption of tunica albuginea with rupture of corpus cavernosum caused by trauma to the erect penis. Erectile dysfunction due to psychological or vascular origin can be encountered as a long-term sequel of surgical treatment. We assessed erectile function following repair. Methods: Patients undergoing penile fracture repair from January 2010 to April 2015 for penile fracture at our institute were included. Degree of erectile dysfunction was assessed by IIEF-5 questionnaire at 3 and 6 months postoperatively. A score of ≥ 20 was taken as a normal degree of erectile function. Low score (≤ 10) was included as moderate to severe erectile dysfunction. Results: Fifteen patients were available for follow up and 14 (93.3%) reported achieving adequate erection for intercourse without erectile or voiding dysfunction. Most patients presented within 48 hours. The patient who presented late (15 days) with bilateral cavernosal injury had erectile dysfunction. Mean total IIEF 5 Score at 3 months was 12.72 (13.4 if delayed injury excluded) and at 6 months was 18.36 (19.4 if delayed injury excluded). No patient had any deformity of the penis. Conclusion: Immediate surgical intervention has low morbidity, short hospital stay, rapid functional recovery and no serious long-term sequelae. Early surgical repair within 48 hours is associated with a good outcome. Only one patient with delayed presentation and bilateral cavernosal tear had erectile dysfunction beyond 6 months. Erectile function improved in all other patients within 6 months.

MOD 01 – 07

Is there more to xanthogranulomatous prostatitis than a histological surprise?

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Introduction: Granulomatous lesions of the prostate are rare benign conditions. Xanthogranulomatous prostatitis is even rarer condition affecting the prostate gland. It can mimic high grade prostatic carcinoma and cause a diagnostic surprise at the final histopathology. Case Report: This was a 70 year old patient who was a diabetic and had Coronary artery disease. He presented with obstructive LUTS with an AUA symptom score of 18. Found to have a 62 cc prostate on USG. While on treatment he developed AUR and then hematuria. Hematuria settled after stopping antiplatelets but he developed urosepsis. After stabilisation, he underwent TURP. HPE came as a surprise: Xanthogranulomatous prostatitis. Discussion: Our patient had a very eventful preoperative period with acute retention, hematuria, UTI and sepsis with acute kidney injury. Did the final diagnosis of XGP had a role to play, is difficult to answer. There is a paucity of literature on the subject with only a handful of reported cases. Xanthogranulomatous inflammations are characterised by the presence of xanthoma cells or foamy macrophages in the inflammatory cell infiltrate. The histological features may at times be confused with high grade prostatic carcinoma and an immunohistochemical panel may be required to differentiate them. There is no known treatment strategy for it and patients are treated based on their clinical presentation. Conclusion: Xanthogranulomatous prostatitis is a rare clinical condition affecting the prostate gland. It may mimic a high grade prostate cancer and mostly turns out as a histopathological surprise.

MOD 01 – 08

Transurethral resection of prostate and sex life

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Introduction and Objective: To study the impact of trans urethral resection of prostate (TURP) in men with benign prostatic enlargement (BPE) on their sex life emphasizing on domains, libido, erection and ejaculation. Methods: All patients presenting with BPE and treated with TURP, between January 2014 and December 2014 were included in our study. They were

instructed to answer International Prostate Symptom Score (IPSS) and Brief Male Sexual Function Inventory (BSFI) questionnaires. Two such questionnaires were obtained from patients, preoperatively and then at 6th month post surgery. Scores of different domains were compared and spearsons rank correlation was applied to correlate the change in IPSS scores and sexual function scores. Results: Total 164 patients participated in our study and the mean age of patients were 66.4 years. Among these, 147 patients had a living wife, 64 (43.54%) of them had active sex life. Among the patients with active sex life, preoperatively, 41 (64%) patients had good libido, 54 (84.38%) had good erection and 57 (89%) had normal ejaculation. At 6 months post surgery 11 (17.1%) showed increased libido while 4 (7.4%) complained of weak erection and 47 (73.44%) patients complained of absent ejaculation. IPSS score showed weak but positive correlation with the domain libido, but did not show any association with domains erection and ejaculation. Conclusions: TURP for BPE, alleviating lower urinary tract symptoms, improves the libido while it adversely affects ejaculation and erection. Thus creating awareness among the patients and more refined surgical techniques are the need of hour.

MOD 01 – 09

Is green light photo selective vaporization of the prostate gold standard in management of benign prostatic hyperplasia in high risk patients

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Introduction: GPVP is progressively becoming an established treatment in patients with LUTS because it is a minimally invasive technique that achieves efficient hemostasis, making it the ideal technique for patients at high surgical risk. We evaluated the efficacy and safety of Green light PVP using Green Light System HPS (120 watts) and TURP for BPH in high-risk patients. **Materials and Methods:** 104 (54 PVP, 50 TURP) patients who underwent Green light PVP and Bipolar TURP for BPH with medical comorbidities from January 2014 to March 2015 were compared in terms of Q max, IPSS, PVR, Operative time, blood loss, indwelling catheterization and short-term complication rates. The follow up data was recorded postoperatively at 6 month. **Results:** In this study 104 patients received treatment (54 Green light PVP, 50 TURP) with all completing 6-month follow-up visits. The two treatment arms are similar with respect to demographic and baseline characteristics. The mean procedure times for TURP and PVP were 50.0 ± 5.5 minutes and 39.0 ± 4.3 minutes respectively. Mean catheterization time for Green light PVP and TURP group were 21.7 ± 0.2 hours and 30.0 ± 0.3 hours respectively. The mean time spent in the hospital was 29.3 ± 2 hours (Green light PVP) compared to 38.9 ± 3 hours TURP. Blood transfusion was required in 2 cases for TURP but not in Green light PVP group. In 25 patients prostate volume was >70 cc with good post op results in PVP group as only 11 in TURP group. 21 patient were on anticoagulant and 17 (31.48%) were of severe COPD and 26 patient were in ASA group II and III. Incidence of dysuria, retention and stricture were more in Bipolar TURP group. **Conclusion:** The Green light HPS is a versatile energy source with effective outcomes for BPH patients even with high-risk patient with minimal complication rates as compared with TURP.

MOD 01 – 10

Effect of finasteride on peri operative blood loss in transurethral resection of prostate

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Introduction: Peri-operative bleeding is a common complication in Transurethral Resection Of Prostate (TURP), the gold standard surgical treatment for Benign Prostatic Hyperplasia (BPH). Though several studies have shown that preoperative finasteride reduces perioperative blood loss, this is not practised routinely. **Objective:** To evaluate the effect of finasteride on perioperative blood loss following TURP. **Methods:** A prospective randomized placebo controlled Study from August 2014 to June 2015 was done in 100 patients by dividing them into 2 groups of 50 patients (group A-received 2 weeks preoperative finasteride 5 mg OD & group B-placebo group). **Results:** Parameter Group A Group B p value (1) Post operative 1.7

2.8 0.000 hemoglobin loss (g%) (2) Resection time (minutes) 46 53 0.002 (3) Intra operative blood 175 220 0.000 loss (ml) (4) Clot retention rate 6% 12% 0.005 (5) Failure to void 4% 10% 0.004 (6) Urinary Tract Infection (UTI) rate with culture 6% 12% 0.005 positive (7) Microvessel Density (MVD) 18.04% 24.3% 0.03 (marker for vascularity) (8) Mean Qmax improvement 4.8 3.6 (ml/seconds). **Conclusion:** We conclude that preoperative finasteride therapy (5 mg OD) definitely reduces the peri-operative complications like intra and postoperative blood loss, need for blood transfusions, operative time, clot retention, MVD, urinary tract infection rate and postoperative voiding failure during TURP, as supported by our study.

MOD 01 – 11

A comparative study of monopolar and bipolar transurethral resection of prostate for benign prostatic hyperplasia

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Introduction and Objective: Transurethral resection of Prostate (TURP) is considered gold standard of surgical management of Benign Prostatic Hyperplasia (BPH) due to the procedure's outstanding, well-documented, long-term treatment efficacy, but the morbidity, e.g., Transurethral Resection (TUR) syndrome, bleeding, urethral stricture remains significant. To circumvent these problems, modifications have been introduced; one of them is bipolar TURP. This objective of this study is to analyze operative outcomes of patients undergoing TURP and bipolar TURP. **Methods:** 29 consecutive patients who underwent TURP or bipolar TURP were included in the study. Data regarding pre-operative parameters (prostate volume, hemoglobin level, serum sodium level) and intraoperative as well as postoperative parameters (need for blood transfusion, postoperative hemoglobin and serum sodium level, postoperative irrigation time & catheter time, hospital stay) was collected and analyzed. **Results:** The mean change in hemoglobin (on postoperative day 1) in monopolar group was - 0.64 g/dl while for the bipolar group it was -1.6 g/dl. The mean change in serum sodium in monopolar group was -5.1 meq/l while for the bipolar group it was 2.13 meq/l. The mean postoperative irrigation time in monopolar group was 27 hrs while for bipolar group it was 25.83 hrs. The mean postoperative catheter time in monopolar group was 66 hrs while for bipolar group it was 70 hrs. **Conclusion:** Bipolar TURP is associated with lesser decrease in postoperative serum sodium levels and a shorter irrigation time, but a greater decrease in hemoglobin levels on postoperative day 1 as compared to monopolar TURP.

MOD 01 – 12

Initial experience of HoLEP

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Introduction: Endoscopic management of benign enlargement of Prostate is gold standard. Holmium Laser enucleation is emerging as size independent standard for treatment prostatic adenoma which has been recently introduced in our country. This study was undertaken to assess the early clinical experiences with this relative new technology. **Methods:** During July 2014 to December 2014 total 40 cases were underwent HoLEP. All patients preoperatively diagnosed as BEP. Intraoperative and post operative data were analyzed. **Results:** Age range 55 to 75 years. Average operation time 90 mins, mean enucleated tissue weight 45 gm. Catheter time range from 24 hour to 72 hours. None patient required blood transfusion. Duration of hospital stay 2-4 days. All patient followed up in one month. One patient developed dysuria that was managed conservatively. **Conclusion:** HoLEP is an effective treatment modality for BEP due to its shorter catheter time, shorter hospital stay, minimal risk of blood transfusion, quick return to full activity. For further comment study on large number of cases in different institute are required.

MOD 01 – 13

Perioperative outcomes of laser PVP for BPH using GreenLight Laser 180W in large prostate glands

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Laser PVP has been performed using 80W and 120W lasers. The advantages of Laser PVP included using physiological irrigation fluids, and better hemostasis, which allowed the use of Laser in high-risk patients. However, they were limited to use in small prostate glands (<40 gms) due to fibre devitrification, fibre breakage and excess energy usage during. The GreenLight Laser 180W is an improvement over the 120W machine. We present our experience of using the GreenLight Laser in our institution, with a focus on the perioperative outcomes of medium (40-80 gms) and large (>80 gms) prostate glands, as also the outcomes in high-risk patients who were anti-coagulated.

MOD 01 – 14

To evaluate the efficacy and safety of transurethral enucleation of prostate by bipolar for the patients with benign prostatic hyperplasia

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Methods: We prospectively evaluated clinical outcomes of TUEB in 85 patients with BPH from March 2013 to May 2015. Mean ages of the patients were 70.6 years. International prostate symptom score (IPSS), IPSS--quality of life (IPSS--QOL) were assessed before and 3 months after surgery. Maximum flow rate (Qmax), and post-void residual volume (PVR) were also evaluated before surgery and 1 and 3 months after surgery. Results: The median prostate volumes and resection volumes were 78 gm (range: 40 – 167 gm) and 64.6 g (range 25 – 125 gm), respectively. The median operation time was 65 min (range 25 – 100 min). Total IPSS scores were significantly improved from 24 (range 17-31) to 5 (2–8) points, and IPSS - QOL score from 6 (5-6) to 2 (1-2) points, for both $p < 0.001$. Qmax and PVR were also significantly improved 1 and 3 months after TUEB. Qmax from 5.2 (2.9-9.3) to 16.5 (10.5-22.9) at 1 month, and 15.6 (10.2-20.5) ml/s at 3 months, ($p < 0.0001$), and PVR from 151.5 ml (81.5-269.5) to 16.5 ml (0-35.5) at 1 month, and 6.0 (0 – 35) ml at 3 months, ($p < 0.0001$). No case required blood transfusion. Three episodes of UTI, 8 cases of mild stress urinary incontinence, 1 case of urinary retention occurred transiently with recovery within 1 month after surgery. Conclusion: TUEB appears to be efficacious and safe and can become a strong contender in the treatment of BPH.

MOD 01 – 15

A study of association of TRUS derived parameters with acute urinary retention in symptomatic patients with

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Aim: To study the association of bladder outlet obstruction with parameters of TRUS for patients with symptomatic benign prostatic hyperplasia. **Methods:** men aged 45-85 years with moderate to severe LUTS suggestive for BPH. Categorized into two groups. One set of patients with only lower urinary tract symptoms of BPH. other set of patients with episodes of acute urinary retention requiring intervention. TRUS was used to calculate the transition zone (TZ) volume, the transition zone index (TZ index = TZ volume/total prostate volume), the total prostate volume, and presumed circle area ratio (PCAR) study period is from June 2015 to december 2015 - ongoing study. Data Analysis: T TEST sample size estimated: 150, mean and standard deviation will be calculated to obtain the P value and the final association will be made with statistical support.

MODERATED POSTER SESSION – 2

MOD 02 – 01

Disorders of sex development: Multidisciplinary approach to a complex diagnosis: A case report of two unique cases

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Introduction: Disorders of sexual differentiation (DSD) are the result either of inappropriate virilization of girls or incomplete virilization of boys. Here we report 2 unique cases of DSD: Case 1 – CAIS (Complete Androgen Insensitivity Syndrome) Case 2 – 46 XY Congenital Adrenal Hyperplasia (17 Hydroxylase Deficiency). **Materials and Methods:** Patient 1: A 26 yr old female presented with complaints of inability to achieve menarche. Patient 2: A 19 yr old female presented with complaints of inability to develop secondary sexual characteristics, didn't attain menarche and no bleeding with Oral Contraceptive Pills. Detailed work up including physical examination, lab investigations, radiological imaging was done and both the patients were taken up for diagnostic laparoscopy. Results: Post operative period was uneventful; both the patients were discharged on POD 2. HPE: Case 1 – Bilateral immature testicular tissue with fallopian tube. Case 2 – Immature testis. Conclusion: DSD is a complex disorder which needs multidisciplinary approach and Laparoscopy is an integral part in the management and diagnosis of this complex disorder.

MOD 02 – 02

Ureteral triplication: Report of two cases

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Introduction: Ureteral triplication is a rare congenital anomaly of the urinary tract. Since the first description of ureteral triplication by Wrony in 1870, only about 100 cases have been reported in the literature of which only 5 cases were of bilateral ureteral triplication. Ureteral triplication may be complicated with contralateral ureter duplication, vesicoureteral reflux, ureterocele, crossed ectopic fused kidneys, ureteropelvic junction obstruction and duplication of the bladder. We report two cases of ureteral triplication that we treated. **Case Reports:** A 48 year old gentleman presented with right sided flank pain with recurrent hematuria of 6 months duration. Radiological evaluation (USS and CT abdomen) revealed right duplex collecting system with three separate ureters. Right upper and mid moiety were dilated with suspicious union in the lower third (Type II ureteral triplication according to Smith's Classification). DTPA renogram showed poorly functioning upper 2/3rd of Right kidney. The patient underwent elective open right upper polar nephrectomy with excision of upper and middle moiety ureters. A 43 year old lady presented to us with recurrent urinary tract infection since 3 years. Ultrasound showed suspected multiple moiety ureters bilaterally. Intravenous urography revealed bilateral triplicate ureters uniting near the mid third with single bilateral ureteral orifice (Bilateral Type III ureteral triplication according to Smith's Classification). All the moieties were excreting normally. The patient was managed conservatively with antibiotics and recovered completely. Conclusions: Ureteric triplications (uni and bilateral) are very rare congenital anomalies and treatment depends on case to case basis.

MOD 02 – 03

Use of fibrin sealant in adult hypospadias surgical repair

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Introduction: Urethrocutaneous fistulas (UCF) and flap dehiscence (FD) are more common after adult as compared pediatric hypospadias (HS) surgical repair. The aim of this study is to evaluate whether the application of fibrin sealant over the suture lines reduces these complications. **Materials and Methods:** 18 adult patients with hypospadias were included in this study. Out of them 5 patients underwent HS surgical repair plus application of fibrin glue over the suture line. In the control group 13 patients underwent HS surgical repair only. Variables assessed included: type of HS, fibrin sealant used and postoperative complications. Results: The frequency of complications were 0 vs. 46% for UCF, 20 vs. 61% for FD, 0 vs. 38% for flap necrosis (FN) and 0 vs. 30% for meatal stenosis (MS) in the treatment and control groups respectively. Conclusion: The incidence of UCF and other complications after HS surgical repair can be reduced by applying fibrin sealant over the suture lines.

MOD 02 – 04**Prospective study to compare the efficacy of tamsulosin, solifenacin in treatment of double-J Stent-related lower urinary tract symptoms****Nipun AC, Keshavmurthy R, Nagaraja NH, Shivlingaiah M, Srinivas J, Nagbhusan M, Sanjay RP**

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Introduction: The double-J stents are common tools and integral part used in endourologic practices. Despite the usefulness of double-J stent some patients encounter stent-related morbidities. These symptoms represent a prevalent problem with considerable effects on the quality of life. In this prospective study we intend to evaluate the effectiveness of alpha-1-blocker (tamsulosin), antimuscarinic (solifenacin), in reducing double-J stent-related LUTS. **Patients and Methods:** A total of 122 patients with double-J ureteral stenting were randomly divided, postoperatively, into 4 groups. In group I (n = 32), no treatment was given (control group), group II (n = 30) received tamsulosin 0.4 mg daily, group III (n = 30) received solifenacin 10 mg daily, and group IV (n = 30) received a combination of both medications. Before insertion and 3 weeks after, all patients completed the International Prostate Symptom Score (IPSS) quality of life component of the IPSS (IPSS/QoL). **Results:** The demographics and preoperative questionnaires scores of all groups were comparable. There were statistically significant differences in all scores in favour of groups II, III, and IV as compared to control group (p value < 0.005). Group IV showed statistically significant differences in total IPSS, QoL score compared to II and III. **Conclusions:** Combined therapy of tamsulosin and solifenacin significantly alleviated lower urinary symptoms associated with double-J stents as compared to either medication alone.

MOD 02 – 05**Arteriovenous malformation of the distal penile urethra: A rare cause of spontaneous massive urethral bleed**
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Introduction and Objectives: Arterio-venous malformations (AVMs) of the genitalia presenting as urethral bleeds are very rarely encountered and even those reported in literature are either congenital or post traumatic. On account of this, there are no specific guidelines to diagnose and manage these AVMs. We present the case of an AVM encountered at the distal penile urethra, managed endo-urologically via electro-coagulation. **Case (Methods):** A 55 year old gentleman presented with a one day history of massive urethral bleed, with no history of trauma or coitus. He was imaged using a CECT scan as well as a Doppler ultrasound and managed with careful cystoscopic electro-coagulation to achieve acute immediate control of the bleed. A post operative MRI confirmed sufficient local control. Patient was asymptomatic at 1 month of follow up. **Discussion (Results):** AVM of the distal penile urethra is infrequently encountered. The distal site makes it extremely liable to be missed by both imaging as well as during introduction of the cystoscope. Thus a high index of vigil is mandated even during the entry of the cystoscope to avoid missing this elusive entity. **Conclusion:** AVMs of the genitalia are infrequently encountered and thus the necessity to maintain a high index of vigil towards these rare causes of massive urethral bleeds. "What the mind knows is what the eyes see" is thus what is to be borne in mind by any astute clinician.

MOD 02 – 06**Single step dilatation versus balloon dilatation in the Indian scenario: A prospective randomized study****Alok Srivastava, Ishwar Ram Dhayal, Priyanka Rai**

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Objective: To compare single step amplatz dilation (SD) versus balloon dilatation (BD) in patients undergoing percutaneous nephrolithotomy at our tertiary care centre in a prospective randomized manner. **Materials and Methods:** Patients undergoing PCNL were randomized into 2 groups of 50 each. In the first renal dilation was done using Balloon and in the second it was done using the 30-F Amplatz dilator directly. The groups

were compared for operating time, fluoroscopy time, tract dilatation failure, cost of the dilatation system, stone free and re-treatment rate, decrease in hematocrit values, blood transfusion rates etc. **Results:** The operative duration along with radiation exposure was comparable in both groups as were the transfusion and stone free rates. Cost and failure rate of dilatation were more in Group I although the latter difference was not statistically significant. Also the amplatz dilator could be used further in many more cases thus reducing the cost further. **Conclusion:** Both the dilatation methods reduce radiation exposure and are equally feasible but SD seems to be more cost effective specially in the Indian scenario.

MOD 02 – 07**Laser lithotripsy for large bladder calculi****Avinash Rai, Nischith D'souza, Mujeerurrahman, Altaf Khan**

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The treatment of patients with large bladder calculi is often challenging to treat endoscopically with the current modalities available to the practicing urologist. We present the results of cystolithotripsy of bladder stones larger than 4 cm with the 100 watt holmium:YAG laser. In our series of ten patients, all patients were rendered stone free without complication using the Ho:Yag laser, with an average anesthesia time of 60 min. No intraoperative or postoperative complications occurred with minimal tissue trauma and even less stone migration were observed. Our conclusion is that large bladder calculi more than 4 cm can be managed in a safe and effective way with Ho:YAG laser and its use may make it easier to remove large calculi endoscopically that otherwise would need open surgery

MOD 02 – 08**Conventional PCNL for large staghorn calculi: Our experience****Bhaskar Ved, Kumar M, Sankhwar SN, Goel A, Singh BP, Singh V, Sinha RJ**

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Introduction and Objectives: In the era of mini and micro perc we evaluate our results of conventional PCNL for treating large staghorn stones. **Methods:** A total 20 patients underwent PCNL for staghorn calculus during Jan 2013-Jun 2015. Most common approach was through superior calyx while second needle puncture was made in another calyx with a guide wire passed through it in case another puncture was anticipated later on. Data analysis included procedure time, length of hospital stay, number of access tracts, number of procedures performed, transfusion rates, early and late complications, and stone free status. **Results:** Multiple tracts were needed in 55% of the procedures, and several sessions of PCNL were needed in 40% of patients. Superior calyceal puncture was most common approach and used to extract maximum stone bulk. Those patients who required another puncture were approached through tract which was initially secured over the guidewire. Blood transfusion was needed in 6 patients (30%). The stone-free rate for PCNL monotherapy was 75% (15 patients). Secondary procedures were required for 5 patients (25%), and included shock-wave lithotripsy for 4 and ureteroscopy for 1. Multiple tracts resulted in a more chances of local wound infection (20%) in 4 patients which was managed conservatively. **Conclusion:** PCNL is a safe and effective procedure in the management of staghorn calculi, with outcomes somewhat different to those reported for percutaneous management of smaller volume stones esp with regards to number of punctures and sessions required and number of secondary procedures needed.

MOD 02 – 09**Complications of percutaneous nephrolithotomy: Our institute experience****Dhanasekaran D, Thiyagarajan K, Ilamparuthi C, Karunamoorthy R, Sivabalan J, Balasubramanian R**

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Objective: To evaluate the complications of percutaneous nephrolithotomy and various factors affecting them in patients undergoing the procedure using CROES-Clavien scoring system recently defined by Clinical Research

Office of Endourological Society Study Group. Patients and Methods: A prospective study was done on 72 patients who underwent percutaneous nephrolithotomy in Dept of Urology, between October 2014 to June 2015. Procedures were performed in prone position. The tract was dilated under fluoroscopic guidance and an adult rigid nephroscope complemented with a cystoscope/ureteroscope were used. Complications were recorded using CROES-Clavien score defined by Clinical Research Office of the Endourological Society Study Group. Results: Of 72 patients 49 developed complications. The complications were graded according to CROES Clavien scoring system and were as follows. Grade I - 23, Grade II - 17, Grade III - 6, Grade IV - 2 and Grade V - 1. Most common intraoperative complications were bleeding requiring transfusion and urinary extravasation. Most common postoperative complications were fever, transient hematuria and transient urine leak from wound site. Stone burden, location, presence of co-morbidities, number of punctures, operation duration and experience of operating surgeon were all associated with complications. Conclusions: Grading of all possible PCNL complications by CROES Clavien scoring system improved precision in reporting complications in a standard objective format. Such models are useful for making inter-observer comparisons to obtain clinically relevant inferences. Mean operation duration and experience of operating surgeon were the only independent factors affecting complications of PCNL.

MOD 02 – 10

Efficacy of diclofenac suppository in reducing pain during DJ-stent removal: A prospective double blind randomised trial

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Introduction: We studied the analgesic efficacy of the diclofenac suppository compared with placebo in patients undergoing Double J Stent removal. **Methods:** Between August 2014 and July 2015, 200 consecutive consenting male and female patients underwent DJ stent removal under local anesthesia were enrolled in the study. Randomization was done on the day of procedure by opaque sealed envelope method into two groups A and B of 100 patients each. Group A had received diclofenac suppository and group B had received a similar sized, similar colored placebo suppository 30 minutes before the procedure. Lignocaine jelly was used for all the patients. Pain perceived by the patient during DJ Stent removal was noted on a pre designed proforma. Visual Analogue scale was used for assessment of pain with 0 to 10 numeric pain distress scores. **Results:** there was no significant difference in gender distribution and age distribution between two study groups. The mean pain score of diclofenac group was 3.73, and for placebo 5.19. Mann-Whitney test showed there was significant difference in pain score between two groups with 'p' value of 0.001, with a mean rank pain score of 72.30 for diclofenac group and 128.70 for placebo group. **Conclusion:** These results suggest that diclofenac suppository can be used as an adjunct lignocaine jelly to relieve pain during DJ stent removal.

MOD 02 – 11

Initial experience of RIRS

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Introduction: Ability to obtain direct retrograde endoscopic access to ureter and kidney revolutionized for treatment and diagnosis of upper urinary tract calculi, tumours and renal obstruction. Though the technique was introduced in different part of the world for a long time but in Bangladesh it is regularly going on in small number of institute from a short time. This study was done to access Initial experience of RIRS for management of upper urinary tract calculi. **Materials and Methods:** During July 2014 to December 2014 total 30 cases were underwent RIRS for management of upper urinary tract calculi. Among the 30 cases post PCNL residual stone 3 cases, middle calyceal stone 15 cases, upper ureteric stone 5 cases, renal pelvic stone 7 cases. Only 3 cases stone size more than 3 cm. Calculi were fragmented/dusted by holmium Laser. All cases done under general anesthesia. D J stent introduced in 17 cases and in other cases ureteric catheter kept in situ for next 24 hours. **Results:** Age range 25 to 65 years. Average operation time 60 mins, stone clearance confirmed by direct

visualization and C arm fluoroscope. Ureteric catheter along with urethral catheter removed on 1st POD. D J stent removed on 14th POD. None patient required blood transfusion. Duration of hospital stay 2-4 days. All patient followed up in 2 weeks. **Conclusion:** RIRS is safe and effective method for the management of Upper ureteric & renal stone. RIRS by use of Flexible URS in the treatment of upper ureteric & renal stone offers a urologist wide range of therapies. Hospital stay short, patient can go normal activity faster. It needs expertise. For further comment study on large number of cases and in different institute are required.

MOD 02 – 12

Endourological management of unusual foreign bodies of the urinary bladder: Our experience

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Introduction and Objective: Every urologist has to deal with foreign bodies of the urinary bladder during their clinical practice. Most of these are implanted iatrogenically or as a result of deranged psychology of the patient. Removal through endourological means is not always possible especially when long standing unusual foreign bodies are found. **Methods:** 11 patients presented to our outpatient and emergency department with foreign bodies in their bladders leading to urinary tract symptoms. These foreign bodies included metallic bolt, wire, broomstick, plastic pegs, hair and retained catheters. Attempt was made to remove the foreign bodies using endourological means. **Results:** The mean age of presentation was 39.70 ± 17.74 years and the mean duration of symptoms was 27.30 ± 32.68 weeks. 8 of these patients were males and self-insertion of the unique foreign bodies was evident in half of the cases but a reasonable history could be elicited only in two of these cases. Psychiatric evaluation had little to add to the management. Foreign body could be extracted successfully in toto in all cases, one of which required transurethral litholapaxy and percutaneous extraction. **Conclusions:** Endoscopic management of foreign body in the bladder is successful with basic urological armamentarium with no long term sequel especially in females. Percutaneous extraction with endourological instruments is a reasonable alternative.

MOD 02 – 13

A curious case of ureteric diverticulum mimicking ureteric injury following road traffic accident

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Introduction: Ureteric diverticulum is a very rare disorder with less than 50 cases described in literature. The presentation of this condition is varied and there is no general consensus on the definite methods of diagnosis. It can be asymptomatic or symptomatic and is often discovered insidiously during the course of investigations for other urologic conditions. Early diagnosis of ureteric diverticula can help prevent unnecessary interventions and distress to the patient. **Case Report:** A 52 year old male presented with polytrauma following road traffic accident. He had grade 4 splenic trauma, chest injuries, facio-maxillary fractures and suspected lower ureteric injury. He was referred to the Urology emergency for evaluation. On radiologic examination there was contrast extravasation which indicated a possible lower ureteric injury. Subsequently the patient underwent endourological examination and was found to have a ureteric diverticulum which was undiagnosed till now. Thus the ureteric diverticulum was the cause for the radiologic picture of contrast extravasation mimicking injury. **Conclusion:** We report this case due to the unique and serendipitous discovery of a ureteric diverticulum which mimicked a ureteric injury in a case of polytrauma. This case highlights the curious presentation of an asymptomatic diverticulum which led to contrast extravasation. The correct and final diagnosis could be made following an endoscopic visualization.

MOD 02 – 14

Management of calyceal diverticular stones by coventional PCNL and keeping the stent across the diverticulum

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Introduction: Calyceal diverticula are rare renal anomalies present in 0.6% of population. They are associated with calculi in 50% of the population. Therapeutic procedures include several minimal invasive techniques. We are presenting cases of calyceal diverticular stones which we managed by PCNL and stenting across the diverticulum. **Study Methods:** Here we present a series of 15 cases of calyceal diverticular stones which were managed in our hospital from august 2013 to feb 2015. All patients were subjected to PCNL and followed up with X-Ray KUB and uSG – KUB in the post operative period. **Results:** All 15 cases were managed by PCNL with stent kept across the diverticulum. DJSR done after 3 weeks. Post operatively there was complete stone clearance and there was no recurrence with a maximum follow up of six months. In all the cases access were attained by directly puncturing using calculi as guidance. **Conclusions:** Calyceal diverticular stones required a high index of suspicion on imaging. Simple stenting across the diverticulum for a period of 3 weeks has prevented any recurrence of symptoms.

MOD 02 – 15

Difficult stent removal: A simple stepwise protocol for their management

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Introduction and Objective: Stent removal is a routinely done urological procedure and at times we encounter difficult stent removals. If these cases are not managed properly, then there can be complications like stent breakage, bleeding secondary to mucosal injury or rarely PUJ avulsion. Our objective is to make a simple stepwise protocol for their management and to present our series of patients with difficult stent removals and various management options that we had used. **Methods:** We collected data of all the patients who had come to us for stent removal from august 2013 to May 2015 (2 years). Total of 217 stent removals were performed and 27 patients had difficult stent removal. About 19 patients had undergone stenting after URS for ureteric stone disease, 6 patients were stented prior to ESWL and 2 patients for infected hydronephrosis. **Results:** Using the simple stepwise protocol we could manage all our patients without any complications. 7 patients underwent cystolitholapaxy, 9 were subjected to URS, 8 patients required URS with pneumatic lithotripsy after multiple attempts of ESWL and 1 patient had to undergo PCNL for stent retrieval. **Conclusions:** D-J stents have been widely used since many years and this has corresponded to the increase in possible complications during stent removal, including stent migration, encrustation, stone formation, and fragmentation. We have consolidated all such cases that we had managed in our department over the last 2 years and have come up with a management protocol that is simple to follow and easy to execute.

MODERATED POSTER SESSION – 3

MOD 03 – 01

Perigee system for the management of cystocoele: Our initial experience of 40 cases

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Introduction and Objectives: Cystocoele is one of the most commonly diagnosed pelvic organ prolapse in women. The Perigee transobturator cystocoele repair system is a safe and effective procedure. We are reporting our three-year experience with the Perigee system in the management of cystocoele. **Methods:** All patients who underwent cystocoele repair with the Perigee system between May 2012 and May 2015 at our institution were included in the study. The cystocoele was classified with the Pelvic Organ Prolapse Quantitation (POPQ). The study involved a POPQ assessment pre- and post-operatively at six weeks, three months, six months, 12 months and subsequently biannually. **Results:** A total of 40 women were involved in the study. The anatomical success rate for the device was 94.3%. There were no life-threatening complications. The mean operative time was 61.63 minutes with hospital stay of 1.13 days. No mortality was recorded.

Genital discomfort was the most common complication. None were found to have mesh extrusion or recurrence of cystocoele. In 4 patients underlying overt stress incontinence manifested after Perigee repair. In them, Tension free Vaginal Tape was done after 6 months. 45.1% reported no sexual dysfunction, 40.9% reported improvement in sexual function, while 4.1% reported worsening of dyspareunia. **Conclusion:** In our Three-year experience, the Perigee system for the treatment of cystocoele is deemed safe with no recurrences or mortality, with acceptable risks. It allows anatomic repair with less morbidity, hospital stay and recovery time.

MOD 03 – 02

Experience of tertiary care centre in repairing vesico-vaginal fistula with or without interposition flap: A prospective randomized study

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Aim to present our experience for the repair of vesicovaginal fistula (VVF) with special reference to repair with or without flap. From January 2013 to July 2015, 80 VVF patients with mean age of 32 years underwent operative treatment. Fistulas were divided into two groups according to type of repair done into transvaginal repair or transabdominal repair done according to surgeon's choice (40 patients in each group). Patient in each group is prospectively randomised into further two subgroup (20 patients in each) depending upon flap used or not in repair. Patients were evaluated at one month and at 3 month by dry or incontinence. 20 patients underwent transvaginal repair (10 patients underwent with martius flap and 10 patients without flap), 20 patients underwent transabdominal repair (10 patients underwent with omental flap and 10 patients without flap). Demographics parameter are comparable in all group. The most common etiology was obstetric trauma, while the second most common cause was post hysterectomy VVF. 3 patients were incontinent in transvaginal group (2 patient in without flap subgroup and 1 patient in flap subgroup). 2 patients were incontinent in transabdominal group (1 patient in without flap subgroup and 1 patient in flap subgroup). All p value are < 0.5. Hence we conclude that fistulas either repair with flap or without flap by any route (transvaginal or transabdominal) achieved comparable success rates.

MOD 03 – 03

Use of tamsulosin in functional bladder outlet obstruction in adult females: A prospective double blind study

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Objectives: To investigate the clinical effect of tamsulosin for the treatment of functional bladder outlet obstruction (BOO) in adult women. **Methods:** In a prospective, longitudinal double blind study, 25 women affected by functional BOO were treated with tamsulosin. Inclusion criteria were: age >18 years, reporting voiding symptoms, uroflowmetry maximum flow rate (Q [max]) under 12 ml and/or presence of postvoid residual greater than 50% of the voiding volume. Exclusion criteria were: patients suffering from any other anatomical or functional disorder such as urethral stenosis, pelvic organ prolapse, neurological disturbances etc. Tamsulosin was administered in a single daily dose of 0.4 mg for at least 30 days. Primary outcomes were clinical efficacy and Q (max) improvement; secondary outcomes were tolerability and safety. Voiding and storage symptoms and uroflowmetry results were assessed before and at the end of the alpha-blocker therapy. **Results:** Tamsulosin therapy was well tolerated. After therapy symptomatic improvement occurred in 68% (17/25). Those with isolated voiding symptoms improved in 72.7% (8/11) cases and those with both voiding and storage symptoms improved in 64.3% (9/14). Uroflowmetry parameters improved in 56% patients (14/25). **Conclusions:** These results suggest that alpha-blocker may be an effective treatment option in women with voiding dysfunction due to functional BOO.

MOD 03 – 04

Robot-assisted laparoscopic repair of vesico-vaginal fistula: Initial experience

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Introduction: Standard open trans-abdominal repair of VVF requires a long cystotomy incision, supra-pubic drainage and delayed recovery while laparoscopic repair is limited by difficult suturing in pelvic surgeries. Hence, robot assistance is being increasingly explored. We share our initial experience of robot-assisted laparoscopic transvesical VVF repair. **Materials and Methods:** Data of all patients who underwent robot-assisted VVF repair from December, 2014 to August, 2015 were collected and analyzed. Cases underwent standard pre-operative evaluation. After cysto-vaginoscopy and placement of access catheter across the fistula, five ports (three for robotic & two for assistant) were placed. Following adhesiolysis, small cystotomy close to the fistula was made. The vaginal and bladder flaps were separated and repaired in transverse and vertical direction respectively. V-Lock sutures were used for bladder closure. Omental/sigmoid colon epiplocae or peritoneal flap was interposed along with placement of pelvic drain. **Results:** Ten cases, all following abdominal hysterectomy, were operated. Mean age was 46 +/- 7.5 years. Four were complex VVF (three recurrent and one post-radiation). All were supra-trigonal except one. Ureteric catheterization was needed in three cases due to close proximity of ureteric orifice to the fistula site. Mean operative-time was 131 +/- 56 minutes. Median blood loss was 50 ml (IQR = 17.5 ml). No supra-pubic catheter was placed. Mean duration of drain and hospital stay were 3.3 +/- 0.8 and 7.2 +/- 2.4 days respectively. Till date, follow-up of eight patients is available and they are doing well. **Conclusion:** Current data suggest that robotic-assisted VVF repair is safe and feasible conferring the advantages of minimal invasive surgery.

MOD 03 – 05

Urosepsis following urological procedures for calculus disease with pre-operative UTI

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Aim: The aim of this study was to analyze the incidence, risk factors, spectrum of severity of urosepsis & management of urosepsis in patients undergoing elective urological procedures for calculus disease. **Materials and Methods:** 210 patients with pre operative UTI were analysed from June 2014 to June 2015 (URS - n = 42, PCNL-n = 8, cystolithotripsy-n = 34, DJ stenting-n = 96, pyelolithotomy/nephrolithotomy-n = 10, ureterolithotomy-n = 2 and cystolithotomy-n = 18). All these patients were treated with course of antibiotic and cultures were confirmed to be sterile prior to surgical procedure. All cases were grouped and defined as per "Surviving Sepsis International Guidelines". **Results:** 80 patients had urosepsis (URS-12, PCNL-4, cystolithotripsy-16, DJ stenting-30, pyelolithotomy/nephrolithotomy-8, ureterolithotomy-2 and cystolithotomy-8), presenting as - SIRS in 17 patients. - Sepsis in 49 patients. - Severe sepsis in 9 patients - Septic shock in 1 patient - 4 deaths (URS - n = 1, PCNL - n = 1, Pyelolithotomy/nephrolithotomy - n = 2). 49/80 patients developed sepsis on postoperative day one itself. 50/80 patients with urosepsis had diabetes and 20/80 patients with urosepsis had renal insufficiency. It was found that there was significant association of diabetes and renal insufficiency with urosepsis (p=0.036728 and p=0.001779 respectively) by chi-square test. Association of urosepsis with obstructed system was significant as compared to deobstructed systems (p=0.001065, chi-square test). The association of renal insufficiency with mortality was significant (p=0.001935, chi-square test). **Conclusion:** Diabetes and renal insufficiency patients are at a higher risk to develop urosepsis. Mortality is higher in patients developing urosepsis with underlying renal insufficiency. High index of suspicion and early intervention are the corner stones for better outcome.

MOD 03 – 06

Management and outcomes of emphysematous pyelonephritis: Our experience

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Introduction and Objectives: The main objective of this study is to elucidate the clinical features, radiological classification, prognostic factors of Emphysematous pyelonephritis (EPN), to compare the modalities of

management and outcomes among various radiological classes of EPN. **Materials and Methods:** Among the patients who were admitted between June 2012 to March 2015, 34 consecutive cases were diagnosed as EPN were included in the study. The baseline characteristics, laboratory data, abdominal ct scan were taken, based on ct scan staging, HDN/HDUN/ collection were managed with PCN/DJ stenting/PCD, results noted. **Results:** The mean age of our patients was 55 years, the male to female ratio is 1.2:1. The most common predisposing factor is diabetes (28 cases-82%) followed by urolithiasis. Right side (50%) was more commonly affected than left (35.3%), five patients (11.7%) had bilateral involvement and one had EPN of solitary kidney (2.9%). 2 patients (6%) received antibiotics alone, four (12%) had an early nephrectomy, 25 (73%) received PCD/PCN/DJ stenting alone and 3 (9%) had delayed nephrectomy after initial PCD. **Conclusion:** Traditionally EPN is associated with high mortality but recently the mortality rates are reducing because of improved staging modalities and effective antibiotics/PCD/PCN/DJ stenting.

MOD 03 – 07

Giant renal hydatid cyst (20 cm): A case report

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A 25 year young man approached for medical fitness certificate before employment. He didn't have any complaints whatsoever. His clinical examination showed that he was in good general health. His abdomen showed a large lump in right flank. The lump was painless, firm, cystic and he was unaware of it. X-ray KUB showed a huge right renal soft tissue shadow with multiple calcific shadows in it. Ultrasonogram, Plain & contrast enhanced CT scan abdomen showed hugely dilated right kidney, measuring 20 cm. approximately. The interior of kidney had multiple small cysts and debris suggestive of hydatid cysts. The renal parenchyma was very much thinned out and kidney was non-functional. His left kidney was normal. Hydatid serology was positive. He does not have a pet dog nor any close association with dogs. Surgery was planned with all precautionary measures to prevent anaphylactic reaction. Anaesthetist geared up for hypotension or cardiac arrhythmias & vasopressors, steroids were kept ready for any eventuality. Right kidney was approached through standard loin incision. With disinfectant mops soaked with 'H2O2' all around, right kidney was decompressed. The kidney was very tense and contained clear fluid on needle aspiration. Through a small incision in the kidney, we could see hundreds of daughter cysts and debris floating in clear fluid. After emptying all the cysts which ran into a few hundreds the kidney collapsed into a thin bag. Hence nephrectomy was performed. There was no sign of anaphylaxis throughout the operative course. The wound healed well and patient was discharged after uneventful course after 1 week. This huge hydatid cyst is presented for its rarity of being silent, even after it attained large proportions (20 cm) & to the extent of destroying entire renal parenchyma and rendering it functionless.

MOD 03 – 08

Acute renal infections: A case series

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Introduction: Bacterial nephritis or renal infection can be regarded as a spectrum from mild acute pyelonephritis (APN) to renal abscesses or emphysematous pyelonephritis (EPN). Imaging like CT help delineate the nature, extent and severity of disease and also reveal complications. **Materials and Methods:** This was a retrospective study of all patients diagnosed with acute renal infections admitted in our hospital from 1st January 2012 to 31st May 2015. The inpatient medical records of all patients identified were reviewed in detail. Patients were divided into six groups based on the diagnosis. **Results:** Out of 115 patients there were 64 (55.65%) women and 51 (44.34%) men. 67 (60.8%) patients in the study group had acute pyelonephritis. 34 (50.7%) of them uncontrolled sugars on presentation with leucocytosis seen in 47 (70.1%) patients. All were treated conservatively. 11 (9.5%) of them had pyonephrosis and 8 (6.9%) had renal abscess formation. 19 (16.6%) patients had EPN, Perinephric abscess was noted in 7 (6.1%) patients. 3 patients were diagnosed to have XGP after nephrectomy. 15 patients had renal and perinephric abscess, 50% of them were treated conservatively and the other 50% were

treated by either percutaneous needle aspiration. 7 patients in the EPN group were treated by intervention like PCD/aspiration/stenting. EPN group had 21.05% death due to profound sepsis. Conclusion: Although all these disease entities fit it to acute renal infections, their course and prognosis are different. A set protocol is required for the betterment of patient outcome.

MOD 03 – 09

Study on Genito-urinary tuberculosis: The spectrum of manifestations

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Introduction: Tuberculosis is the commonest worldwide cause of mortality from infectious diseases. The genitourinary tract is a primary target of hematogenous infections and is one of the common sites of extra-pulmonary tuberculosis. The clinical examination, microbiological examination and Imaging play an important role in the making of a timely diagnosis and in the planning of treatment, and thus help to avoid complications such as renal failure and disseminated disease. The diagnosis of GUTB still remains a challenge, especially in the early stage of the disease. **Objective:** To study the clinical spectrum of manifestations of Genito-urinary Tuberculosis **Materials and Methods:** It is a prospective, observational study conducted in the period between august 2014 to august 2015. The major criteria used for the diagnosis of Genito-urinary tuberculosis are (a) Granulomatous lesion in biopsy specimen, (b) Acid fast bacilli in urine or tissue, (c) Positive Polymerase chain reaction or gene expert (d) A combination of strong clinical, laboratory, and radiographic evidence of genitourinary tuberculosis with negative bacilli search in the urine. **Results:** Total number of the cases included in the study was 36. Among them 11 patients were immunocompromised, 8 patients had past history of pulmonary or extra-pulmonary tuberculosis. Disseminated disease was found in 6 patients. 8 patients presented with non-specific symptoms with repeated attacks of Urinary tract infections (culture proven/sterile pyuria). **Conclusion:** Genitourinary tuberculosis has a varied presentation, often silent and without classical genital or generalized symptoms. A strong clinical suspicion is necessary for correct diagnosis.

MOD 03 – 10

Genitourinary Tuberculosis: A 15 years single centre audit

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Introduction: Tuberculosis (TB) is the cause of unaccountable human sufferings and economic loss of any developing country. TB continues to be an important public health problem in our country. GU TB is most common extra thoracic form that occur secondary to blood stream spread. **Materials and Methods:** We include last 15 year data from Jan-2005 to July 2015. It includes patient profile, clinical features, organ involvement, investigations, surgery performed and treatment outcome were studied. Evaluation included detailed clinical history and physical examination, followed by a complete hemogram, renal function test (RFT) with urine examination and bacterial cultures. A voiding cystourethrogram, nephrostogram and retrograde pyelogram, ultrasound KUB and computerized tomography were obtained as and when necessary. Cystoscopy and bladder biopsy were done wherever indicated. Fine needle aspiration cytology (FNAC) and or biopsy was performed. **Results:** On evaluating the collected data it was found that 30-50 years was the most common age group. Abdominal pain was the most common presenting symptom. Kidney was the organ most frequently affected. TB PCR was the important supportive evidence for diagnosis. Hydronephrosis was the most frequent abnormal radiological finding. Majority of patients required some form of surgical intervention along with the multidrug chemotherapy. **Conclusion:** Patients of urogenital TB generally present late with cicatrization sequelae and complications related to the disease. Diagnosis of such condition requires high suspicion and wide range of investigations. Multidrug chemotherapy is the ideal treatment. But unlike tuberculosis of other organs, management of genitourinary tuberculosis requires surgical intervention in almost 60% of cases including major reconstruction as well as ablation.

MOD 03 – 11

Laparoscopic pelviureteric reconstruction in patients with aberrant anatomy

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Introduction: Laparoscopic pyeloplasty is standard of care in adult patients with PUJO. Aberrant anatomy is usually an indication for open reconstruction. **Aim:** To share our experience of Pelvi uretric reconstruction with laparoscopic surgery in patients with aberrant renal anatomy. **Materials and Methods** Four patients with aberrant renal anatomy and symptomatic pelvi uretric junction obstruction who presented in last one year. One patient had horse shoe kidney, two had retrocaval ureter and one had pelvic kidney. All patients presented with flank pain and their anatomic abnormality with PUJ obstruction were detected on evaluation. **Observation and Results:** All patients were young adults. Retrocaval ureter patients were male & had problem on right side, whereas patients with Horse kidney and pelvic kidney had problems on left moiety. Patient with Horse Shoe kidney was a 32 years old female where as left unascended kidney was male patient of 19 years. Operative time for patients with retrocaval ureters was average 150 minutes whereas it was 240 and 210 minutes for Horse shoe and pelvic kidney respectively. Duration of hospitalization 7, 5, 7 & 4 days for Horse Shoe kidney, pelvic kidney, and for two patients with retrocaval ureter respectively. DJ stenting was done in all cases. No patient needed blood transfusion, & none had significant post operative complication. None of these patients required conversion to open procedure. **Conclusion:** Laparoscopic PUJ reconstruction is feasible in aberrant renal anatomy in selected patients by experienced surgeon and the duration of surgery may be dependent on anatomy.

MOD 03 – 12

Laparoscopic ureteroureterostomy for benign upper ureteric strictures

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Introduction and Objective: In recent years an increasing incidence of ureteric strictures has been observed, owing to the widespread use of laparoscopy and upper urinary tract endoscopy. Upper ureteral strictures can be managed by either an endoscopic approach or surgical reconstruction, including open or laparoscopic techniques. Minimally invasive surgical ureteral reconstruction is becoming popular due to its higher success rate. However only few studies have been published regarding the laparoscopic ureteroureterostomy (LUU). Our objective is to discuss our results of LUU in benign upper ureteric strictures. **Methods:** We retrospectively studied laparoscopic (n = 10) ureteroureterostomy procedures conducted from July 2009 to July 2014 for benign upper ureteric stricture disease. The demographic, operative, complication, and outcome data were analyzed. **Results:** The length of ureteric stricture ranged from 2 to 4 cm, mean operative blood loss was 80 ± 20 ml and median hospital stay of 3 days. There were no complications. Ureteral patency had been successfully reestablished in all 10 patients (100%) at a mean follow-up of 22 months. **Conclusions:** Due to the small number of cases, it cannot be concluded that LUU is superior to open surgery. But improved visualization and minimal invasiveness facilitate meticulous dissection and precise suturing which makes the laparoscopic approach as worthy alternative to open surgery.

MOD 03 – 13

Does the duration of infertility affect semen parameters and pregnancy rate after varicocelectomy

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Objectives: The aim of this study is to evaluate the duration of infertility on postvaricocelectomy semen parameters and spontaneous pregnancy

rates. Materials and Methods: From August 2009 to July 2013, we retrospectively reviewed the medical records of 250 patients, who underwent inguinal varicocele surgery because of infertility at department of urology. The patients were divided into three groups according to the duration of infertility (group I, 1-3 years, group II, 3-6 years and group III, >6 years). Total sperm motility counts (TMCs) before and after varicocele surgery and spontaneous pregnancy rate among these groups were statistically compared. Results: The changes, regarding preoperative and postoperative TMCs and spontaneous pregnancy rate were noticed between group I and III. Preoperative TMCs in group I and III was 11.5 ± 1.5 , 6.4 ± 0.8 , respectively. Postoperative TMCs in group I and III was 28 ± 3.4 , 20.2 ± 1.4 , respectively ($p < 0.05$). An overall spontaneous pregnancy rate of 30.78% was achieved after inguinal varicocele surgery. The greatest spontaneous pregnancy rate was achieved in Group I (34.3%) and the lowest pregnancy rate in Group III (25.7%) ($P < 0.05$). Conclusions: The duration of infertility correlates negatively with the improvement in the total sperm count and the spontaneous pregnancy rates after varicocele surgery. Therefore, duration of infertility should be considered in treating a patient with a varicocele as a cause of infertility.

MOD 03 – 14

Study of treatment outcomes and benefits of subinguinal artery sparing varicocele surgery in non-obstructive azoospermia and severe oligospermia

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Introduction and Objective: Varicoceles are most frequent physical abnormality found in infertile men and surgical ligation of spermatic vein is generally accepted as treatment of choice. Varicocele prevalence is 35% and 81% among men with primary and secondary infertility, respectively. Azoospermia or severe oligospermia occurs in 4-13% of men with clinical varicoceles. Improvements in sperm density and motility after varicocele surgery have been widely reported for men with oligospermia. However, the value of varicocele surgery in nonobstructive azoospermia (NOA) and severe oligospermia (SO) (<5 millions/ml) remains controversial. So we conducted this study to assess the efficacy of varicocele surgery in UOA and SO. **Materials and Methods:** Single centre prospective study in 26 patients over a period of 4 years to evaluate the effect of Varicocele surgery in men with Azoospermia and severe Oligospermia. All patients underwent scrotal doppler to confirm varicocele. Subinguinal artery sparing varicocele surgery done with loop magnification. Patients were followed up with semen analysis and USG Doppler scrotum at 3 monthly interval with maximum follow-up of 3 year. Success of surgery defined in the form of increase in sperm count and conception rates. **Results:** In this study 23 patients of 26, showed improvement in their sperm count and sperm motility. While 5 out of 26 achieved pregnancy. **Conclusion:** Varicocele surgery resulted in improvement of spermatogenesis for several patients with NOA and SO. Hence, varicocele surgery seems to be a reasonable option in selected patients with NOA and SO.

MOD 03 – 15

A rare case of endometriosis urinary bladder: Case report

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25 yrs old female presented with painful voiding and hematuria. CT scan shows 5 x 3 cm growth on the left postero-lateral wall of the urinary bladder. TUR of the mass was done and the biopsy report was suggestive of cystitis cystica. Patient was asymptomatic upto one year then presenting with the similar complaints. Cystoscopy shows 2 x 3 cm solid growth at the same place. TUR was again and the biopsy showed same results. Recurrence again occurred after one year and cystoscopy shows solid growth at the same site. Then excision of the urinary bladder mass and left ureteroneocystostomy was done. Biopsy shows endometriosis.

MODERATED POSTER SESSION – 4

MOD 04 – 01

Laparoscopic management for recurrent chyluria

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Introduction: The passage of white milky urine of chyluria is a manifestation of many tropical diseases. It is the consequence of the lymphatic system abnormality. The management of Chyluria is not standardised. Recurrence has been common with medical management and sclerotherapy. Surgical option though available is not widely practiced. We opted for surgical management for patients with recurrent chyluria. **Case Report:** Case 1 40 year old female presented with c/o passing milky urine for 4 months. She had no other urinary symptoms. She is a known case of Recurrent chyluria with failed sclerotherapy (betadine instillation) done thrice (2003, 2007, 2014). Urinary triglycerides was 684 mg/dl. Case 2 30 year old female c/o passing milky urine for 1 year with no other urinary symptoms. She is a known case of recurrent chyluria with failed sclerotherapy (betadine instillation) done in 2010 & 2013. Urinary triglycerides was 234 mg/dl. **Discussion:** After cystoscopic localisation of the involved kidney, decision for laparoscopic lymphovenous disconnection taken. The kidney is dissected free of lymphatics in hilar area coursing along the renal vein. The lymphatics dissected. Areolar tissue containing dilated lymphatics travelling to the kidney in the peri-renal and hilar region are dissected and divided. Hilar stripping is continued up to proximal 3-4 cm ureter, the site for majority of shunts Patient was followed up for the period of six months. Patients were evaluated for urinary triglycerides and were found to be negative. **Conclusion:** Laparoscopic lympho-venous disconnection has a role in definitive treatment of recurrent chyluria.

MOD 04 – 02

Comparison of tadalafil and tamsulosin in relieving stent related symptoms: Prospective, randomized, double blind, placebo controlled study

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Introduction and Objective: Ureteral stents many times were associated with severe LUTS. Tadalafil is effective in LUTS due to BPE. As stent related symptoms mimics LUTS caused by BPE, recent studies explored role of tadalafil in relieving stent related symptoms. Aim of this study was to demonstrate effect of tadalafil and tamsulosin in relieving stent related symptoms in comparison with placebo and to compare its side effects. **Methods:** Prospective, randomized, double blind, placebo controlled study conducted from 2013 to 2014. All patients with DJ stent inserted post URS/RIRS/PCNL were included. Patients were randomized to three groups. Group I received placebo. Group II received tadalafil 10 mg OD, while group III received tamsulosin 0.4 mg OD. All patients were given tramadol 50 mg tablet on demand for pain. Patients were assessed at four weeks by IPSS score, VAS score and analgesic requirement. **Results:** Group I, II and III had 50, 53 and 51 patients respectively. At the end of 4 weeks 47, 48 and 48 patients were available for final analysis in each group. All demographic criteria were comparable in three groups. Mean IPSS score at 4 weeks in group I, II and III was 17.64 ± 6.24 , 11.60 ± 5.51 and 10.58 ± 4.87 respectively ($p < 0.001$). Mean VAS score was 2.72 ± 1.12 , 1.78 ± 0.88 and 1.80 ± 0.88 respectively ($p < 0.001$). Mean tramadol requirement was 259, 102 and 94 mgs respectively ($p < 0.001$). Side effects like headache, dizziness were significantly less in tadalafil group. **Conclusion:** Both tamsulosin and tadalafil were equally effective in relieving stent related symptoms. However tadalafil had fewer side effects.

MOD 04 – 03

Assessment of uroflowmetry parameters in healthy male adults in different voiding positions

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Introduction: In urology uroflowmetry plays significant role in patients presenting with Lower urinary tract symptoms (LUTS). It is a simple, non invasive test. Uroflowmetry can be used as a simple test for screening of the patient with LUTS. Flow curve pattern, Qmax and VV are regarded as the most clinically useful measures. Uroflowmetric measurements in a healthy male may vary according to patient factors (age, sex), Voiding positions, Voided volume and Circadian rhythm. This can lead to bias in studies where the primary end point is to assess a small improvement of maximum flow. To the best of our knowledge there is no large series that assess impact of different voiding positions on the uroflowmetry parameters in healthy males. **Aims and objectives** To evaluate impact of voiding positions on uroflowmetry in healthy male, see reproducibility of uroflowmetry measurements and to see variation in uroflowmetric measurements according to circadian rhythm. **Materials and Methods:** This is a Prospective study done between Jan 2014 to Jun 2015 (18 months) and conducted in department of urology after clearance from institutional review board. All healthy male volunteers who were willing to participate in the study underwent history and physical examination to rule out any disease affecting urinary system. Each participant voided four times on two consecutive days in sitting and standing postures. **Results:** There was no significant difference found in uroflowmetry measurements between sitting and standing posture or during morning and evening. **Conclusion:** Voiding posture or diurnal variation does not affect uroflowmetry results.

MOD 04 – 04

A study of iatrogenic ureteric injuries in non urological surgeries

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Introduction: Ureteral injuries during surgeries cause significant postoperative morbidity particularly pelvic and abdominal surgical procedures with challenging complications and interventions. Management depends on various factors including the nature of the injury, site of the injury, time of identification of injury, suspicion of the injury, primary surgical scenario, availability of expertise and also technical issues like endoscopic interventional expertise, general performance status of the patient. The study was done with the intent to analyse the demographic profile, causes of iatrogenic ureteric injuries, various clinical presentation, identification, diagnosis, and management of iatrogenic ureteric injuries in various non urological surgical procedures. **Methods:** We prospectively analysed 24 consecutive adult patients, who were operated in the various department of our hospital and had iatrogenic ureteric injuries which were identified during intra-operative or post operative period. All ureteric injuries were managed by hospital urological team and the iatrogenic ureteric injuries were treated as per the standard surgical protocol management. Various factors mentioned above were collected and analysed using standard statistical analytical methods. **Results:** Our study showed the injuries were predominantly due to gynaecological surgery (75%), of which abdominal hysterectomy was the major contributor (53%). Also timing of identification of injury was also predominantly postoperative period. Lower ureter was the most common site, and partial injury (45.8%) was the predominant type. Endoscopic management was much helpful in the injuries identified in postoperative period. **Conclusion:** Endoscopic intervention is effective in the management of indicated ureteric injuries with good functional outcome nevertheless open surgeries are needed in many of the injuries.

MOD 04 – 05

Critical evaluation of socioeconomic factors in the success of peritoneal dialysis as renal replacement therapy

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Introduction and Objective: Clinical outcomes of Peritoneal Dialysis (PD) have long been linked to medical factors, but very few data exists

for influence of socio-economic, educational and demographic factors. PD is a home based renal replacement therapy which requires ability to self monitor and self manage, both of which are closely associated to the socio-economic status. In this study we examine the impact of these factors on drop out rates from PD-either due to death or transfer to Hemodialysis (HD). **Methods:** We retrospectively analyzed 41 consecutive patients who underwent insertion of PD catheter at our centre from March 2012 to November 2014. Data were obtained from patient records, electronic database of PD registry and medical social worker in PD. The data collected included, demographic details, comorbid conditions and socio-economic variables like, living arrangements (living alone/family), educational level (Illiterate/middle school/high school/college or above), distance from PD centre, employment status, type of PD (intermittent or continuous) and the reason for drop out. **Results:** Lower education level was associated with increased drop out rates when compared to higher education level. Patients travelling longer distance from the primary PD centre were noted to fare worse than the patients living nearby, but well educated patients showed no such differences. Intermittent type of PD was associated with more drop out rates compared to the continuous type of PD. **Conclusions:** Socio-economic factors play a major role in the success of peritoneal dialysis and need to be considered prior to initiation of the program as renal replacement therapy.

MOD 04 – 06

Peculiar case of foreign body in urethra

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61 Yrs male admitted with the c/o passion urine via rectum-3 days No other urological complaint's 10 days ago patient had alleged to have insertion of a big needle into urethra Patient was apparently normal for 1 week On examination-foreign body felt in perineum & rectum Procedure Lithotomy position through perineal incision urethra defined. Foreign body pushed from rectum & removed via urethra through ventral incision.

MOD 04 – 07

Web applications and internet in urology: A boon for patient and urologist

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Internet is a part of everyone's daily life and have changed the way we live. These have also changed the way in which we practice medicine. The information technology revolution is being described as the most important development in the history of humankind since the industrial revolution. A large amount of information on patient care, education, and support is available on the internet. Now, there is new wave of internet apps available on play store, app store in android mobile, iphone and ipad which is useful resource for patient education, quick access to guidelines and journal article, for building the practice and marketing of urology practice. Here, We review internet resources in urology concentrating on mobile application related to urology which are helping urologist as well as patient in improving standard of care. This will help urologist in knowing which internet or mobile applications are available and how to use it for their and patient benefit.

MOD 04 – 08

Are we over-diagnosing and over-treating urological patients!

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Aim: To analyse whether there is over-diagnosis and over-treatment of urological patients. **Materials and Methods:** Retrospective analysis (Jan'10 to Dec'14) of patients with various urological problems. **Observations:** Renal calculi: Incidentally detected, non-obstructive calculi treated conservatively and followed up no stone no change in size <5 mm 43% 34% 5-9 mm 11% 58% Renal staghorn with CKD: 54% patients maintained on 3 monthly stent exchanges avoided hemodialysis. Ureteric calculi

(initially stented): 29.4% had spontaneous clearance. Complication rate was significantly low (<1.3%). EPN: 26 of all 40 patients initially treated with minimally invasive procedure did not require further intervention. BEP: SPC insertion done for patients with high risk or long wait list. 18% subsequently passed urine spontaneously per urethra and SPC removed. Raised Sr. PSA: Sensitivity and specificity of pre biopsy multiparametric MRI in predicting Ca prostate (when Sr PSA 4-10 ng/dl) was 87.5% and 92.8% respectively. Analysed patients underwent conservative or less invasive treatment by default. Most were well maintained without major complications. In some, disease resolved completely. Therefore, prudent to reconsider indication and mode of treatment of these patients to begin with. Availability of technological advances and the economics involved therein, guiding our decision for mode of treatment should be analysed. Conclusion: Many patients with various urological problems can be managed and well maintained on conservative and less invasive modes of treatment. Hence, in an era of rapid technological advancement and with the economics involved, it is necessary to introspect if the urological patient is indeed being over-diagnosed and over-treated.

MOD 04 – 09

Urodynamic evaluation of diabetic patients with voiding dysfunction I

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Introduction and Objectives: Diabetic bladder dysfunction is one among the most common and bothersome complication of diabetes mellitus. Studies suggest that prevalence of diabetic bladder dysfunction is around 25-87%. Diabetic bladder dysfunction has always created diagnostic dilemmas. In this study we have attempted to ascertain the relationship between diabetic voiding dysfunction and vesico-sphincteric behaviour using pressure flow studies. **Methods:** Forty-two diabetic patients complaining of voiding disorders were studied from October 2014 to July 2015, according to history, clinical examination and urodynamic assessment. The various factors like age, sex, symptoms, duration of diabetes, type of bladder, compliance, capacity, first sense of filling were studied. **Results:** Age, sex do not significantly influence the outcome. In contrast to classical diabetic cystopathy, majority of patients had preserved sense of filling and normal capacity bladder. The presentations included obstructive LUTS, irritative LUTS, retention and incontinence. The urodynamic findings included hypotonia, hypertonia, poor compliance, DHIC, atonia, delayed sensation in descending order. The diagnosis of DHIC is increasing which suggests the importance of urodynamic studies. **Conclusion:** These data suggest that classical diabetic cystopathy is not the most common urodynamic findings in patients with diabetes mellitus and voiding dysfunction, and in fact these patients present with variable pathophysiological findings. These findings demonstrate the importance of urodynamic studies in diagnosing voiding dysfunction in diabetics before initiation of therapy.

MOD 04 – 10

Evaluation of voiding dysfunction in patients with traumatic brain injury

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Introduction: Traumatic brain injury (TBI) is one of the most common forms of severe neurologic impairment as a result of trauma. **Aim:** In this study we collected data on TBI patients with neurogenic bladder dysfunctions to understand the spectrum of voiding dysfunctions and to investigate the relationships of the severity of TBI with the presentation of urinary tract dysfunctions. **Materials and Methods:** This is an Observational study, during 2012 to 2015. All consecutive patients with isolated traumatic brain injury of GCS – (9-15) are included in the study. Those with previous neurological disorder, Spine injury and Urological conditions were excluded. After a successful voiding trial, uroflowmetry and ultrasound abdomen and pelvis were done. An Urodynamic study is done in patients with poor urinary flow (<15 ml/sec), high post void residual urine (100 ml) and/or lower urinary tract symptoms **Results:**

During the study period a total of 55 patients were enrolled in study. 43 were males and 12 were females. Mean age was 34.4 years (12-87 years). 22 out of 55 patients were catheterized in the emergency department. All patients successfully voided after removal of catheter. 2 patients had frequency and urgency and One patient had urinary urge incontinence. 7 had abnormal flow on uroflowmetry. In the non-catheterized group (33), one had lower urinary tract symptoms with poor flow and 19 had poor flow on uroflowmetry without symptoms. 26/55 had poor stream on uroflowmetry. 19 patients underwent urodynamic study either due to urinary symptoms or poor stream. 9/19 had urodynamic abnormality. 8/19 patients had high detrusor pressures with poor flow on pressure flow studies. One patient had hypocontractile bladder. There was no significant correlation ($p = 0.23$) between the traumatic brain injury pathology and Urodynamic abnormality. There was also no significant correlation seen between site of lesion and urodynamic abnormality. **Conclusion:** The prevalence of urinary symptoms in mild and moderate traumatic brain injuries is low (7.3%). Detail urological and urodynamic evaluation is needed in selected patients to diagnose asymptomatic urodynamic abnormality and to treat accordingly.

MOD 04 – 11

Urethral extrusion of ventriculoperitoneal shunt: A rare complication after bladder augmentation

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Augmentation cystoplasty in neurogenic bladder patients with previous ventriculoperitoneal (VP) shunt surgery were accepted in literature provided necessary intraoperative precautions taken. Shunt infection, malfunction, obstruction and extrusion were known complications. We are sharing our experience of perurethral extrusion of peritoneal catheter of VP shunt 15 months after augmentation cystoplasty in a 16 years old boy. To the best of our knowledge this is rarely reported complication in literature after augmentation cystoplasty. Patient was managed by broad spectrum antibiotics coverage, removal of distal peritoneal shunt and prolonged perurethral catheter drainage with involvement of neurosurgery team. Patient had not developed any infectious or neurological signs at 1 and 3 monthly follow up and kept on clean intermittent catheterization.

MOD 04 – 12

Urethral duplication and stricture: A Rare Combo

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Introduction: Urethral duplication is a rare congenital anomaly. Development of stricture in this condition is rarely reported. **Materials and Methods:** A 12 yr old boy who was born with urethral duplication was evaluated at a local hospital. He was subjected to cystoscopy via dorsal urethra following which he developed retention of urine and urosepsis. Following this he could pass only drops of urine and presented to us with epididymo orchitis. After control of infection with antibiotics, MCU was attempted. Catheter could not be passed beyond 7 cm and AUG revealed stricture at membranous urethra. **Results:** Cystoscopy was performed via ventral urethra. Guide wire was passed and under vision the strictured segment at the junction of both urethra were divided using cold knife. SPC was left and a repeat MCU after 14 days revealed resolution of stricture. Uroflow after 8 weeks revealed a normal flow with minimal PVR and SPC was removed. **Conclusion:** In urethral duplication, ventral urethra is usually functional. Instrumentation via dorsal urethra was the cause of stricture in this case and OIU could relieve the problem completely.

MOD 04 – 13

Inafnt with bilateral PUJ obstruction presenting with anuria and sepsis

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Introduction and Objective: To discuss an unusual case of 3 months old child with bilateral PUJ obstruction presenting with anuria and sepsis. **Methods:** 3 month old female, normal birth, fullterm with history of

bilateral mild antenatal hydronephrosis (ANH) at 24 weeks admitted with history of recurrent UTI with fever and complaints of not passing urine for 48 hrs, irritability with raised creatinine. A placement of urethral catheter show no urine in bladder. Imaging revealed bilateral hydronephrosis with suspected PUJ obstruction. Patient was urgently taken to operational theater and DJ stenting tried bilaterally but failed. Significant ureteral stenosis. Obstruction first relieved by bilateral nephrostomies followed by bilateral pyeloplasty after child recovered and stabilized. Results: Postoperative period was uneventful. Follow up sonography showed reduction of hydronephrosis with creatinine coming down to normal with increase in growth of child. Discussion: Most specialists agree on postnatal evaluation of children with history of ANH between 2-4 weeks of birth. Infant patient presenting with anuria in a case of bilateral PUJ obstruction in antenatal diagnosed low grade ANH is very rare.

MOD 04 – 14

Urinary tract involvement in laryngo-onycho-cutaneous syndrome: A rarity

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Introduction: Laryngo onycho cutaneous syndrome (LOCS) is a rare syndrome with fewer than 50 cases reported. We report such a rare case in a 08 year old child. **Case Report:** Our patient first presented with history of breathing difficulty, and found to have laryngeal web. He was subjected to multiple LASER fulgurations. The problem did not subside and he landed up with a tracheostomy and subsequently surgical correction for complete narrowing of the upper airway with ankyloses of both arytenoids. He also had poor wound healing; loss of finger and toe nails, and granulation tissue over his right conjunctiva. At 06 years of age he developed obstructive urinary symptoms and thereafter recurrent episodes of acute retention. At cystoscopy we found a fleshy mass arising from the posterior urethra and extending till the bladder neck. A LASER fulguration was done. **Discussion:** LOCS is a rare autosomal recessive genodermatosis characterized by altered cry at birth, skin erosions, nail abnormalities, and excessive granulation tissue in the conjunctivae and larynx. Shabbir first described this condition in 1986 in individuals born to consanguineous families from the Punjabi regions of India and Pakistan. The molecular basis of LOC syndrome was elucidated with the discovery of a unique mutation affecting the N-terminus of the $\alpha 3$ chain of laminin-332. The involvement of the urinary system is not well described in the existing and the documentation of the fleshy mass in the urethra is probably the first known report.

MOD 04 – 15

Clinical and functional outcome of laparoscopic pyeloplasty in pediatric age group at a single center

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Introduction and Objectives: Pelvi-ureteric Junction (PUJ) obstruction is the most common congenital abnormality of urinary tract and account for 80% of cases. The gold standard treatment of this pathology is Anderson-Hynes dismembered pyeloplasty, performed in a conventional open procedure as well as newer minimally invasive techniques, both endo-scope and Laparoscopic techniques. The objective of this study is to assess the functional outcome in pediatric patients who have undergone laparoscopic pyeloplasty. **Methods:** It is a retrospective study which included 38 patients who have undergone laparoscopic pyeloplasty in last 5 years in the department of Urology. Data was collected from follow up visits and Hospital based information system. **Results:** There were 38 patients out of which 20 were males and 18 were females with mean age being 7.2 years (2 years to 16 years). Left side PUJ obstruction was more common than right side. Patients were evaluated with Diethylene Triamine Penta-acetic acid (DTPA) renogram or intravenous urogram for functional assessment preoperatively and postoperatively. Postoperative DTPA renogram results showed good drainage pattern of hydronephrotic kidneys indicating good surgical outcome. Improvement in renal clearance function was noted in 33 patients whereas it was same postoperatively in 5 patients. Serum creatinine did not worsen in any of the patients. No major complication was noted in the study. **Conclusion:** Laparoscopic pyeloplasty is a safe and effective procedure for PUJ obstruction in pediatric age group.

MODERATED POSTER SESSION – 5

MOD 05 – 01

Severe congenital penile torsion with urethral diverticulum: A rare case report

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Introduction: Congenital penile torsion is a three-dimensional aberration in penile development producing abnormal helical structures of the corpora. The incidence of isolated penile torsion has been reported to be 1.7% to 27%, that of severe torsion to be 0.7%. Torsion is also found to be associated with epispadias, hypospadias and chordee without hypospadias. But congenital penile torsion of 180 with urethral diverticulum has not been reported yet. The rarity of the case and its management warrants this presentation. **Objectives and Methods:** A 5 yr old boy presented at one of the paediatric urology workshop as a case of epispadias with dribbling of urine and soiling of undergarments. On examination, he was found to be a case of severe congenital penile torsion. Median raphe was seen diverting from shaft and could be traced up to midline dorsally conforming the torsion of 180. Renal function and upper tract was normal on ultrasonography and intravenous urogram. Micturating cystourethrogram showed diverticula in penile and bulbar urethra. Torsion could be corrected by penile de-gloving and mobilization of the urethra with spongiosum. Diverticula was resected and double breasting urethroplasty was done. Post operative recovery was uneventful. Urine culture was reported sterile and uroflowmetry showed maximal urinary flow 12 ml/sec at 3 months postoperatively. **Results and Conclusions:** Techniques for the correction of torsion include penile de-gloving with skin re-attachment, dorsal dartos wrap rotation, pubic periosteal stitch, untwisting plication sutures and mobilization of the urethral plate and urethra. The disadvantages of these techniques include effective in minor degrees of torsion, sutures may give away, chances of counter torque, penile shortening and neurovascular bundle injury, leading to sexual dysfunction later. Penile degloving and urethral mobilization has been reported to be an effective, simple and reproducible technique even in severe degree of torsion. The present case was the first case of congenital penile torsion with urethral diverticulum and results of reduction urethroplasty and mobilization of urethra were very good.

MOD 05 – 02

Peritonioamniotic shunt in the management of fetal bladder rupture

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Introduction: Spontaneous rupture of the fetal bladder represents a rare complication as a result of fetal bladder outlet obstruction. Vesicoamniotic shunting using double pig-tailed catheter is the method most commonly used to relieve urinary tract obstruction. We are reporting a case of intrauterine bladder rupture with gross fetal ascitis causing compression on the growing lung, so we managed this case differently by peritonio amniotic shunt instead of vesicoamniotic shunt with good outcome. **Case Report:** A 26 years female with a precious pregnancy presented at 30 weeks and 6 days of gestation with decreased fetal movement. Ultrasonography reported gross fetal ascites, scalp edema and oligohydramnios. Fetal abdominal ultrasonography revealed mild right HUN and normal left kidney. There was a gross ascitis compressing the diaphragm with partially distended bladder with a rent at the dome of the bladder and oligohydramnios. She underwent a shunt placement between the fetal peritoneal and amniotic cavities. Good maternal and fetal recovery noted. At 36 weeks shunt was displaced and lying in the amniotic cavity with progressive increase in the fetal ascitis [Figure 9]. We thought it is futile to wait further, so the child was delivered by LSCS. Immediately after delivery an emergency Blocksom's vesicostomy was performed. post operatively the child recovered well. **Conclusion:** Current role of vesicoamniotic shunt is uncertain. We think that, peritonioamniotic shunt will better decompress the ascites, thereby helps in relieving the pressure on the growing lung leading to better survival.

MOD 05 – 03**Percutaneous nephrolithotomy in paediatric horse shoe kidneys: 10 years experience****Purkait Bimalesh, Sankhwar Satyanarayan, Goel Apul, Singh Vishwajeet, Singh B Pal, Sinha R Janak, Kumar Manoj**

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Introduction: Horse kidney is the most common renal fusion abnormality. Approximately 21%-60% of HSKs are complicated with renal calculus. PNL has better success rate than ESWL or RIRS in HSKs. PNL also the preferred treatment for large stone and complex anatomy. Many literature shows safety and efficacy of PNL in adult HSKs with variable success rate. But literature in paediatric HSKs is scarce. There is always some concern in children because of smaller calyceal system, non availability of paediatric instrument, lower tolerance of blood loss than adult. **Methods:** We retrospectively review PNL in 24 renal units in paediatric patients (<18 yrs) with Horse Shoe Kidney between July, 2006 to March, 2015 comparing the different characteristics, outcome and safety of PNL in paediatric patients. **Results:** Age range of the study group was 4-18. Initial success rate was 81.53%. After auxiliary procedure the final success rate is 93.48%. Overall complications noted in 25%, most of the complications are minor grade. **Conclusions:** Our experience of PNL in paediatric HSKs shows that percutaneous stone surgery in paediatric HSKs is safe and effective with acceptable complication. We found most of the puncture can be made by infracostal approach. Larger sample size with a prospective study design can better define the issue of PNL in paediatric HSKs.

MOD 05 – 04**A rare case: Botryoid Wilms' tumor****Yadav H, Shah S, Kapadia K, Dhake R, Ajitsaria V**

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Introduction: The Wilms' tumour arises from the renal pelvis and has an appearance similar to botryoid sarcoma. Thus such tumours are called botryoid wilms tumour and exophytic expansion is inconsistent with concept of typical wilms tumour. Nine cases of botryoid wilms tumour has been reported in literature including six cases associated with underlying parenchymal lesions. Macroscopic hematuria has been frequently observed in botryoid wilms' tumour. **Case Report:** Here, we report a new case of botryoid Wilms' tumor, a 1-year-old boy, who was referred to us with a chief complaint of gross hematuria. Clinically no lump was palpable but on USG there was 44 x 50 mm well defined heterogenous lesion with internal vascularity in UP with preserved fat plane between liver and kidney. The computed tomography showed a heterogenous, non enhancing central necrotic area involving upper and mid portion of Right kidney, mass of around 57 x 53 x 57 and radical nephrectomy showed that a botryoid sarcoma-like appearance occupied the right renal pelvis. Histologic examination further confirmed this case was a mixed type of Wilms' tumor. **Conclusion:** The prognosis of our patient and previously reported cases of botryoid wilms tumour was good compared with that of typical wilms tumour, since the botryoid type can be detected at an early stage.

MOD 05 – 05**Is cutaneous continent urinary diversion an alternative in previous failed adult female epispadias repair: A case report****Abdul Rouf Khawaja, Javaid Magray, Ashiq Hussain, Sajad Malik, Arif Hameed, Saleem Wani, Baldev Singh**

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Female epispadias without exstrophy is a very rare entity and occurs one in 480,000 female population. Early surgical reconstruction of the bladder neck, urethra and external genitalia is important in establishing urinary continence and to reduce psychological stress on the parents and child. In this case report we present a 25 year unmarried female presented with failure to achieve continence after bladder neck reconstruction at age 4 year by urologist. Due to previous surgical failure, Patient developed psychological problems with poor esteem and wants a procedure which makes her life socially acceptable. A continent cutaneous urinary diversion

was done at a single procedure with a follow up of 06 months. Patient is continent with pouch capacity about 400 ml and emptying her pouch every 4 hrly and actively involving in social activities, enjoying an excellent lifestyle, accepted body image and good personal satisfaction.

MOD 05 – 06**Use of yang monti principle in ileal ureter****Chandra S, Modi PR, Pal BC, Rizvi SJ**

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Objective: Ureteric substitution using the Yang-Monti principle was reported as a modification of simple ileal ureter replacement. In our study, we evaluate the surgical outcome of yang monti principle and effect on renal function. **Materials and Methods:** Five patients underwent ilealureter replacement using the Yang-Monti principle to overcome long ureteric defects over a period of five years (2010-2015). Antireflux implantation into the bladder was performed in 3 patients, 2 had ileoureteric anastomosis. Follow-up protocol was carried out for up to 3 years. **Results:** No significant morbidity was noted. There were minor complications in the form of wound infection that necessitated prolonged stay in one patient. During follow up, no excess mucus production or metabolic abnormalities were encountered. All patients had stable renal function with preserved upper tracts. **Conclusions:** The reconfigured ileal segment for ureteric substitution is a safe technique with an excellent outcome. It uses short ileal segments for reconstruction of an ileal tube of adequate length and offers a durable preservation of renal function without urinary obstruction.

MOD 05 – 07**Lethal tourniquet penile injury****Harsh Gupta, Bhat AL, Goyal Suresh, Kalra Abhay, Singh Vikash, Ramkishan**

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Introduction: Lethal tourniquet penile injury leading to autoamputation and requiring corporo-corporoplasty is not reported yet. Rarity of condition warrants the presentation. **Materials and Methods:** Case 1: A 60 year old male presented in emergency with partial penile transection due a textile thread firmly tied at mid penis for alleviating the overactive bladder symptoms. On examination, there was complete urethral and spongiosal transection along with partial corpora cavernosal transection with local edema, erythema and induration (Grade IV injury). Suprapubic cystostomy was done after cutting the thread as initial diversion procedure. Cavernosography revealed delineation of both proximal and distal segment of penis, and a narrow communication. We did Corporo-corporoplasty after excising the fibrous tissue and end to end urethroplasty was done. Patient was having good urinary flow alongwith penile sensations and erections postoperatively. Case 2: A 5 year old male child presented with purplish congested glans penis almost at the verge of falling. Detailed interrogation revealed that thread was tied by his sister to prevent nocturnal enuresis. On second day of admission darkened glans fell off by itself, leaving a stump of penile shaft with a raw area containing meatus in center (Grade V injury). Child was able to void with reasonably good stream. Meatoplasty was done for correction of meatal stenosis. **Conclusion:** Lethal tourniquet penile injury leading to autoamputation is a rare entity. Early diagnosis and timely management may lead to structural and functional recovery in form of cosmesis, distal penile sensations, erection and urinary flow.

MOD 05 – 08**Ureterocalycostomy: Final resort in management of secondary pelvi-ureteric junction obstruction: Our experience****Nikose JV, Gite VA, Bote SM, Patil SR, Siddiqui MAK, Sane M**

JJ Group of Hospitals, Mumbai, Maharashtra, India

Introduction: Although spectrum of indication for ureterocalycostomy has changed, it is considered as important salvage procedure to bypass extensive peripelvic scarring and provide non-obstructed and dependent drainage. This technique has been used over 40 years, more frequently used for management of failed pyeloplasty, in case of post pyelolithotomy PUJ disruption/scarring and long stricture in upper ureter (specially due to Tuberculosis). **Methods:**

Analysed 03 cases of Ureterocalycostomy from 2009 to 2015 includes 3 patients two males and one female (1 child was 6 years old, adult male 35 years and female 23 years). Ureterocalycostomy was done in two patients and redo ureterocalycostomy in one patient. Indications were post pyelolithotomy in one case, post pyeloplasty and post-ureterocalycostomy in one case and in one patient post uretero-pyeloplasty for upper ureteric long length stricture (Tuberculous). Preoperative anatomical/functional assessment was done by nephrostogram, intravenous pyelography, retrograde pyelography +/- Diethylene triamine pentaacetic acid (DTPA) renal scan. Results: 3 patients underwent ureterocalycostomy, out of which one had redo ureterocalycostomy. Two patients underwent primary procedures in other centres and one patient in our centre by general surgery unit before referring to Urology unit. One patient primarily treated for pelvic stone with total intrarenal pelvis, one for PUJ obstruction and one for left upper ureteric stricture secondary to tuberculosis. All three patients were asymptomatic till last follow up (1 case after 3 times change of stent every 3 months) with objective evidence of relief of obstruction. Conclusions: Ureterocalycostomy is the final resort for salvaging functioning renal unit having complex secondary PUJ strictures. Likely situations were post pyelolithotomy for PUJ stone with complete intrarenal pelvis and PUJ disruption, long upper ureteric stricture (TB) and post ureterocalycostomy anastomotic stricture, if it is done by incision/wedge resection technique primarily.

MOD 05 – 09

A novel use of methylene blue in urethroplasty

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Introduction: Use of methylene blue (MB) to highlight anatomic structures in Urology is well-established. Narrow urethral plate can be difficult to locate. For short bulbar strictures there is dilemma to transect urethra and do anastomosis or perform buccal graft augmentation. Our objective is to assess the value MB during urethroplasty. Methods: Study 1: 5 cc of MB (10 mg/ml) is diluted in 10 cc saline. This is gently injected into urethra. Urethroplasty commenced, urethra opened. Impact of MB staining urethra is assessed. Study 2: In short bulbar stricture insulin needles are inserted in three locations, proximal, at stricture and distal to stricture. MB is injected via distal needle. Absence of MB efflux in proximal needle implies significant spongiositis and anastomotic urethroplasty is performed. Presence of MB efflux in proximal needle means patent spongiosa and buccal graft augmentation is performed. Results: Study 1: 492 consecutive cases prospectively 2010-14. Precise staining of stricture was seen in 464 (94%). Normal appearing urothelium remained pink. In 28 (6%) cases minimal/no staining. Extravasation seen 8 (2%). 22 (4%) cases there was dense staining. Study 2: 22 short bulbar idiopathic strictures. 18 (82%) MB was seen across stricture and transecting urethra was avoided. In 4 (18%) no MB went across so primary excision and anastomosis performed. No patients had adverse reaction. Conclusion: Normal urothelium does not stain by MB. MB stains strictured urothelium. It helps in delineation of stricture and exact area of urethra to be augmented. MB spongiositis can be performed to guide the method of urethroplasty performed. It is a simple, cost effective method to further evaluate the degree of spongiositis.

MOD 05 – 10

Durham Smith's technique revisited: A study of surgical management of 14 cases of post hypospadias fistulas

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Introduction: Common complications after hypospadias repair are fistulas, strictures, residual chordee and diverticulae. Reported rate of fistulas is 0-30%. Cases: Over the last 5 years, we operated 14 cases of post hypospadias fistulas, which include our own (6) and referred cases (8) from elsewhere. All fistulas were simple and in penile region, without strictures, diverticulae or chordee. We repaired the fistulas with a revisited technique described by Durham Smith's 'pant over waist' repair after at least 6 months of primary repair over a feeding tube only, without a proximal diversion. Results: In all cases, feeding tube was removed after 10-12 days. None of the patients had recurrent fistulas or chordee after a maximal follow up of 4 years. Conclusion: Durham Smith repair should be the repair of choice in a properly selected post hypospadias (simple penile) fistulas.

MOD 05 – 11

Penile fracture: Not so rare

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Introduction: Penile fracture is the disruption of tunica albuginea with rupture of corpus cavernosum in erect penis (especially during sexual intercourse). Objective: To discuss the clinical presentations, etiology and management of penile fracture. Materials and Methods: We present 15 cases of penile fracture presented to a tertiary care hospital over the period of three years. All patients were evaluated with history, physical examination and basic work up. All were subjected to the emergency surgical exploration and primary repair of the tear in tunica albuginea. One patient had associated partial urethral tear, which was repaired primarily at the same sitting. Results: Commonest age group was between 30 to 40 years (10 cases). Out of 15 cases, 11 were married and 4 were unmarried. 9 cases presented within 6 hours, 3 were between 6 to 12 hours and rest 3 after 12 hour but before 2 days. 8 cases had fracture as result of forceful coitus and 4 fall from bed or roll over on erect penis and 3 had during manipulation of erect penis. 12 cases were discharged between 7 to 10 days, 2 cases on 7th day and one, who had associated urethral injury, on 14th day. No one had postoperative complication, all patients had full erection except one, who required medical treatment. Conclusion: Although initially regarded as a relatively rare injury, fracture of the penis is an increasingly reported genitourinary trauma. The management of penile fracture requires early diagnosis based on good history taking and physical examination, and prompt surgical treatment in form of exploration with primary repair of the tear. Early surgical repair is associated with a good outcome with minimal complications.

MOD 05 – 12

A critical appraisal of perineal skin substitution urethroplasty for bulbar urethral strictures

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Objective: To retrospectively analyse the outcome of perineal skin substitution urethroplasty in bulbar urethral stricture. Materials and Methods: A retrospective audit of 39 patients who underwent perineal skin substitution urethroplasty between Jan 2005 and July 2014 was underway. Analysis includes stricture etiology and length, as well as complications over the follow-up period. Results: The predominant stricture etiologies were idiopathic including, with a mean stricture length of 3.5 cm (2.5–6.5 cm). All the patients had bulbar urethral stricture. Early complication was seen in 14 patients (36%). Late complication was seen in 6 patients (15%). Overall stricture recurrence was seen in 5 patients (13%) Conclusions: Substitution urethroplasty using perineal skin is technically easier procedure and associated with less morbidity.

MOD 05 – 13

Evaluation and management of ureteric injuries: Our institutional experience

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Objective: To analyze various causes of ureteric injury and management in our institution. Materials and Methods: This is a retrospective study of patients with ureteric injury who were diagnosed and managed in our institution from August 2013 to July 2015. The etiology of ureteric injury was divided into (a) Iatrogenic (b) Traumatic. Of the iatrogenic causes (excluding endoscopic procedures) it was caused during gynecological procedures, vascular procedure and general surgical procedures. In iatrogenic causes, ureteric injuries were identified either intra-operatively or in the post operative period. Intra operative identified injuries were repaired on table. Post operative identified injuries were managed according to the defect site and whether partial or complete injury. Results: Total number of ureteric injuries managed from August 2013 to July 2015 was 28. Iatrogenic cause due to gynecological procedures was 23, vascular surgery - 1, Abdomino perineal

resection - 1. Hysterectomy followed by incision hernia repair presenting as urtero colic fistula - 1. Traumatic injury (due to RTA) - 2. Intra operative management was done in 14 patients. Conclusion: Gynecologic procedures are responsible for the majority of ureteric injuries at our institution. Early intervention is associated with a good outcome and low complication.

MOD 05 – 14

An unusual case off urethral injury

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Case/Background: A 35 yr male with straddle injury presented with protusion of urethra, bleeding and difficulty to void. A defect was palpable in perineum 3 cms below root of penis. RGU showed filling of contrast contiguous with urethral protusion and blunt ending distal to region of bulbar urethra. Methods: Exploration of urethra was done by anterior degloving approach distally and concurrent midline perineal approach proximally. Penile urethra was exposed and traced downwards towards site of injury. Urethral transection and inversion was confirmed after opening the spongiosum under the guidance of dilators introduced into the lumen of distally protruding urethra at the site of palpable defect (distally missing urethral segment). Complete transection occurred distal to bulbar urethra with inversion and prolapse within spongiosum. Reduction was done by haegrove introduced through the opening in spongiosum and brought outside the distally prolapsed urethral lumen. Results: The prolapsed luminal mucosal ends were tied to haegrove tip, withdrawn with gentle traction evertng and reducing completely to reach the site of spongal opening (site of transection). Proximal and distal foley catheterisation was done to confirm patency and to avoid false tracts. Trimmed urethral edges were bleeding. Tension free anastomosis was done with 4-0 V over 14F silicone catheter. Spongiosum was closed. Wound closed in layers with drains and SPC. The repair was successful. Conclusion: A transected protruding Urethra is an exceptionally rare urethral injury and unlike a prolapsed urethra, requires exploration, open reduction, repair followed by rehabilitation and long term follow up.

MOD 05 – 15

Ventral urethral duplication: Extremely rare variety

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Introduction: Urethral duplication is a rare congenital genitourinary anomaly. Ventral urethral duplication, with normal dorsal urethra and accessory ventral urethra, is extremely rare variety. Only few cases are reported in literature. We report two cases of this rare variety. Materials and Methods: A twenty year male presented with penopubic epispadias with a dimple on glans. MRI showed right ectopic lumbar kidney with Y-duplication of ureter. Intraoperatively, there was an accessory urethra on ventral aspect of penis starting from glanular dimple. Urethrocystoscopy of ventral urethra showed blind end at the level of bulb. Dorsal epispadiac meatus was opening into bladder. A second case, six year male child, presented with recurrent terminal dysuria. On Micturating cystourethrogram, he was found to have a dorsal complete and functional urethra. There was an accessory blind ending ventral prostatic urethra starting separately from bladder. Discussion: In sagittal urethral duplications, ventral duplications are rare. There is a complete or incomplete functional dorsal urethra with an accessory ventral urethra. In one of our case, proximal end of ventral urethra was blind and distal end was blind ending in second case. Our cases didn't fit either into Effmaan's or Dass and Burman's classification of urethral duplication Conclusion: Urethral duplications are rare and less than 200 cases are reported in English literature. Presently, there is no classification which can explain all the varieties of urethral duplication.

MODERATED POSTER SESSION – 6

MOD 06 – 01

A case report on buccal mucosa graft for ureteral stricture repair

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Introduction: Management of ureteric stricture especially long length upper one third, poses a challenging job for most Urologists. With the successful use of buccal mucosa graft (BMG) for stricture urethra leads the foundation for its use in ureteric stricture also. Case Report: A 35 year male with diagnosed left upper ureteric stricture following ureteric manipulation reported with left percutaneous nephrostomy (PCN). IVU S/o complete cut off of left upper ureter with proximal hydroureter (HU) and hydronephrosis (HN). Cysto-RGP and Nephrostogram done simultaneously s/o left upper ureteric stricture of 3 cm at L3 level. On exploration, diseased ureteral segment exposed, longitudinal ureterotomy revealed thin strip of urothelium. About 3-4 cm BMG harvested and sutured as onlay with supportive omental wrap. Discussion: The treatment choice for upper ureteric long length stricture is inferior nephropexy, autotransplantation or bowel interposition. With PCN in situ, inferior nephropexy becomes technically difficult, other two are morbid procedures. Use of BMG in this situation is technically better choice with all the advantages of Buccal mucosa. Conclusion: Onlay BMG for ureteral stricture is technically easy, less morbid procedure and can be important choice in future.

MOD 06 – 02

Renal graft salvage following external iliac artery dissection

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A catastrophic but a rare complication of renal transplant is immediate graft dysfunction secondary to external iliac artery dissection. We report our experience of three cases with this complication, all managed successfully by bypass grafting using PTFE vascular graft and re anastomosis of renal artery. Patients and methods From January 2010 to August 2015, 536 kidney transplants were performed by our team. We encountered external iliac artery dissection leading to immediate graft dysfunction in three of our patients in this duration. All were managed successfully by PTFE vascular bypass graft. Results All three patients were managed successfully by PTFE graft and were discharged with an average nadir creatinine of 1.6 mg%. We did not resort to graft nephrectomy in any case. Conclusion High suspicion of external iliac artery dissection and timely intervention using PTFE graft can help salvage precious grafts which would otherwise be lost.

MOD 06 – 03

Logistics of deceased organ donation program

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Introduction: Deceased donor organ transplantation program is still in developing stage in India with very few states doing it regularly. A structured program is the need of the hour which can be followed uniformly across the country so that many institutions which are doing or starting the program can be benefitted from it. Here we present our model for the deceased donor program. Materials and Methods: The program runs with a cohesive effort of the hospital administration, intensivists in various hospitals of our state, different NGOs, the transplant coordinator, the harvesting team, the government and the deceased donor family. As the message of brain dead is received by the coordinator it is rapidly passed on to the administration, the nephrologists, surgical team, anaesthetists, O.T staff and the transport staff. The harvesting team leaves immediately. Deceased donor blood samples are sent to our hospital for matching. The recipient patients are called according to their number in the list and worked up by the recipient team back in the hospital. The harvesting team brings kidneys, liver and at times pancreas. Two best match patients are selected for renal transplantation. Results: With the structured program 40-45 deceased donor harvesting is done every year across our state yielding 80-90 kidneys and 40-45 livers for transplantation and it is showing a rising trend. Conclusion: Our model seems reproducible and can be adopted for organ harvesting at various institutions and hospitals.

MOD 06 – 04**Vascular anomalies in live donor nephrectomy: Our experience****Chandra Sekhar Patro, Behera NC, Majhi P, Panda SS, Swain S, Singh GP, Hota D**

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Introduction: Laparoscopic live donor nephrectomy has become a well-accepted practice in most transplant units. However, the variations and complex of renal vasculature may make the surgery even more challenging during laparoscopic or open donor nephrectomy. The aims of this article are to review embryology of the renal vasculature development and the clinical significance of renal vasculature anomalies during laparoscopic donor nephrectomy and the consequence of kidney transplant. **Discussion:** The results were interpreted and summarised as renal artery development and its anomalies and renal vein development and its anomalies including associated anomalies of the inferior vena cava. The clinical significance during laparoscopic donor nephrectomy was explored. The value of computed tomography angiography was emphasised during live donor work-up and before surgery planning. **Conclusion:** It is paramount for surgeons to have a thorough knowledge of renal vasculature development and to readily identify the anomalies of renal vasculature on computed tomography angiography prior to laparoscopic or open donor nephrectomy. The adverse bleeding event can be therefore prevented.

MOD 06 – 05**Can the DJ stent be dispensed? A prospective randomised study in renal transplant recipients****Charan Kumar GV, Rahul Devraj, Vidyasagar S, Ramachandraiah, Ramreddy Ch, Murthy PVLN**

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Introduction: Use of DJ stent in renal transplantation to prevent postoperative complications like urine leaks or ureteral strictures is well-known. However, routine intraoperative placement of DJ stents at the time of ureteroneocystostomy is debatable. **Aims and Objectives:** A prospective randomized comparative study to evaluate the incidence of urologic complications like UTI, Urinary leak and obstruction with and without a DJ stent during ureteroneocystostomy. **Materials and Methods:** Prospective and randomized controlled study. Done in NIMS from Nov 2012 to July 2015. Out of 176 consecutive renal transplants, 170 were included into the study. All patients were live related renal transplant recipients. Excluded patients 1. delayed graft function 2. hematoma compression and ureteric leak 3. Renal artery thrombosis. 4. sepsis and postoperative death. **Results:** Computer based randomization was done in to two groups of 85 each. Serum creatinine evaluated at the time of discharge, 1st month and 3rd month respectively. P value of serum creatinine between two groups in first and third months are 0.65 and 0.18 respectively which is not statistically significant. Overall, there was no difference in the incidence of UTI between the two groups. Even though there is higher incidence of UTI in stented group (9%) compared to unstented group (7%). p value is 0.58 which is not statistically significant. In unstented group 6 patients developed ureteric dilatation but there is no evidence of obstruction as serum creatinine and renogram were normal. **Discussion:** Even if stents do reduce the incidence of complications, in atleast 95% of patients their use would be unnecessary. In our study, we noticed that there was no difference between stented and unstented renal transplant recipients in the incidence of urological complications. Most studies report no significant difference in the rate of UTI between stented and unstented patients. **Conclusion:** Routine use of stents may not be indicated during Kidney transplantation. Careful surgical technique with selective stenting of problematic anastomoses yields similar results. If stent is used case notes are flagged and patient should be informed that stent must be removed.

MOD 06 – 06**Assessment of pediatric renal transplant in our center****Verma IN, Aditya Pradhan, Rana YPS**

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Introduction: Pediatric Renal Transplants are quite challenging inherently due to anatomical small size of recipient vessels as well as associated

physiological mismatches. We have been doing renal transplants at our hospital since 2012 August. So far more than 140 transplants have been done of which are about 14 Pediatric Renal Transplants. **Materials and Methods:** A retrospective analysis was done on the 14 Pediatric renal transplants who underwent transplantation since August, 2012 to June, 2015. The age, sex distribution, body weight at transplantation, original renal disease, and donor profile; pre-operative, intra-operative and post-operative complications were studied. Triple immunosuppression (Tacrolimus, Azathioprine and steroids) was used & Induction with ATG only in high risk patients. In one patient Augmentation cystoplasty was done before transplant & Right Uretero-Ureteric anastomosis in other patient. All other were standard operations without special maneuvers. **Results:** With follow up for 1 to 3 years, Graft survival was 100%. Single episode of chronic rejection & one episode of UTI were seen. Otherwise patients have shown good results in terms of graft functions. **Conclusion:** The Pediatric Renal Transplant is a very effective procedure with results as good as that of adult transplant.

MOD 06 – 07**Accepting renal grafts with vascular anomalies - bench repair of saccular aneurysm of graft renal artery: A report of 2 cases****John R, Zafar FA, Kamaal A, Kumar A, Ghosh P, Khera R, Ahlawat R**

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Introduction: Limited availability of live donors for renal transplant has resulted in the acceptance of marginal donors with renal vascular anomalies. We present 2 cases of laparoscopic harvest and transplant of graft with bench repair of wide mouthed saccular aneurysm of renal artery. **Methods:** First case is a 53 yr old lady voluntary kidney donor to husband, whose CT angiography revealed 9 x 9 mm saccular aneurysm arising from the posterior division of Right renal artery. The second case is 41 yr old lady whose investigation showed saccular aneurysm measuring 7 x 7 mm of the left renal artery. Both the kidneys were harvested laparoscopically and hilum was carefully dissected on the bench, aneurysm excised and repaired (double breasting) with 7-0 prolene. **Results:** Both the patients had immediate on table diuresis with a good, firm uniformly perfused graft. Doppler done in the operation theatre, on POD1 and at discharge on POD9 revealed good flows in the repaired vessel and all other branches with no leak or hilar collection. The patients had a stable post operative period and was discharged with a creatinine of 0.9 mg/dl. At 3 months follow-up, graft doppler showed good flows with uniform perfusion and normal creatinine. **Conclusion:** Renal grafts with unilateral vascular anomalies amenable to bench corrections can be safely used in renal transplantation and can add to the donor pool.

MOD 06 – 08**Native kidney mass in renal allograft transplant patients: Our experience****Kore V, Mishra S, Ganpule A, Sabnis R, Desai M**

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Introduction: In recent years, patients and renal graft survival has increased, thanks to introduction of new immunosuppressants. Increased survival has increased incidence of cancer in this population. One of the tumors whose incidence has increased is renal cell carcinoma in native kidneys. Its incidence varies significantly between 0.3 to 4.8%. **Objective:** To present our experience of RCC in native kidney in post renal transplant patients **Materials and Methods:** Since 1980 we have performed 2626 kidney transplants. Within last 5 years, we found native kidney mass in 6 patients. Parameters studied were primary kidney disease, immunosuppressive therapy, time from transplant to the diagnosis and dialysis duration, histological type and stage of tumor. **Results:** All patients underwent laparoscopic radical nephrectomies. 1 out of 6, tumor was non-malignant of vascular origin. In other 5 cases, 3 were clear cell RCC and 2 were papillary RCC. All cases were diagnosed as T1N0M0. All the patients had excellent recovery and 100% survival. Follow up till now and no tumor recurrence. **Discussion:** The emergence of RCC in transplant patient has been linked to immunosuppressive therapy, age, past history of RCC and acquired cystic kidney disease. Treatment in initial stages of disease associated with excellent prognosis. Calcineurin inhibitors associated with increased incidence of cancer. **Conclusion:** Urological post-transplant malignancies are increasing problem. Regular surveillance after renal transplantation

is mandatory to detect malignancies early. Standard urological treatment principles can be applied. Non functioning native kidneys with suspicion lesion should be removed early.

MOD 06-09

Salvage of arteriovenous access related aneurysms

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Introduction: Incidence of arteriovenous access related aneurysms (AVA-A) is 5-60% as there is no standardized definition. AVA-A represent a significant challenge which threatens both the arteriovenous fistula (AVF) and the patient. Although the priority is to control life threatening haemorrhage, AVA-As may be salvaged occasionally if no infection. **Objective:** To assess the efficacy of revision surgery to salvage the AVF in patients who present solely with complicated AVA-A. **Methods:** This was a retrospective review of 17 patients who presented with complicated AVA-A from January 2013 to June 2015. 4 out of the 17 AVA-A could be salvaged and their data has been presented here. **Results:** Among the 4 salvaged fistula, 1 had radiocephalic fistula and the remaining 3 had brachiocephalic fistula. The mean size of complicated AVA-A was 3.2 cm. All 4 presented with symptoms, including bleeding (1), lack of normal vein for cannulation (1) and skin changes with impending rupture (2). None had central venous stenosis. Resection of the aneurysm and primary repair (aneurysmorrhaphy) was the most frequently performed revision surgery (3), followed by resection of the aneurysm and interposition Polytetrafluoroethylene (PTFE) grafting (1). All 4 revised AVA-As were punctured within 1 week and are patent at 3 months followup. **Conclusion:** Kidney Disease Outcomes Quality Initiative (KDOQI) Vascular access update suggests timely repair of AVA-A. AVA-A is not the end of an AVF, unless ligation of the AVA-A is necessary, the AVF can usually be salvaged with a variety of surgical techniques.

MOD 06 – 10

ABO incompatible renal transplant: Our initial experience

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Introduction: Renal transplant is an established treatment option for patient suffering for end stage renal disease (ESRD). Majority of programme is based on live related donor with ABO compatibility. With availability of new drugs like rituximab and plasmapheresis, renal transplant with ABOi has become possible. Recently we have started performing ABOi transplant with successful outcome. **Materials and Methods:** Recently total 4 patients with ABO incompatibility underwent renal transplant. Patient were counseled about increased cost as well higher chance of rejection, infection and poor outcome as compared to ABO renal transplant. Convinced patients were prepared for renal transplant as per our ABOi protocol which is as follows On day 14 prior to renal transplant we start Rituximab 375 mg/m² followed by tacrolimus @0.5 mg/kg/day and MMF 500 mg thrice daily. In between 4 to 5 session of plasmapheresis followed by IVIG@100 mg/kg is given till Anti A/B titre comes down to 1:8. Now we give thymoglobulin induction before renal transplantation. Post transplant A/B titre are monitored daily and if titre crosses above 1:16 plasmapheresis is done. Surgical technique were standard. In one pt post transplant plasmapheresis was required due to rising titre. All patient had good fall of serum creatinine and were discharged with normal serum creatinine. All now have follow-up of more than 3 months and are doing well. **Conclusion:** ABO incompatible renal transplant is a reality. Out come now can be matched with ABO renal transplant though they have more chance of rejection, infection and poor outcome.

MOD 06 – 11

Triple renal arteries in cadaver transplant

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Introduction: The use of grafts with multiple renal arteries poses a challenge to the transplant surgeon. I am presenting two cases of triple renal arteries in cadaveric renal transplant done in our institution. **Case Presentation:** Case 1: Cadaveric donor 54/m, H/o RTA, Right kidney received, 3 arteries of equal calibre and 2 veins, 2 upper arteries close to each other, uppermost artery was found cut close to the cuff. Cut uppermost artery was anastomosed end to end to internal iliac artery, Other 2 arteries with separate cuff, anastomosed separately with external iliac artery, second vein sacrificed. Post op period uneventful. Case 2: Cadaveric donor 35/m, H/o RTA, Right kidney received. 3 arteries and one vein, All 3 arteries are adjacent taken with a single cuff. One artery was found cut 1 cm away from the cuff. End to end anastomosis of the cut ends done. Three arteries with single cuff anastomosed to common iliac artery - Carrel's patch. Post op period was uneventful. **Discussion:** The existence of multiple arteries has been considered a relative contraindication because of the incidence of vascular and urologic complications. Recently multiple studies have shown that despite technical difficulties, grafts with multiple arteries present similar indexes of surgical complications and outcome compared to grafts with single artery. Incidence of multiple renal arteries is 1.7%. Post op period in both the cases were uneventful. **Conclusion:** Suboptimal donor organs with multiple renal arteries using the sequential anastomosis technique presents similar indexes of surgical and urological complications and outcome.

MOD 06 – 12

Recipient outcomes in live donor renal transplant allografts with multiple renal arteries

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Introduction and Objectives: Anatomical variations of the graft is a challenging problem in renal transplantation. Multiple renal arteries (MRA) is a common variant with incidences of unilateral and bilateral MRAs, 18-30% and 15% respectively. Compared with procuring kidneys with single renal artery (SRA), MRAs may lead to longer operative times, more complicated dissection and implantation. In this study we assessed the outcome of MRAs allograft. **Methods:** A prospective study was designed to compare recipient outcomes between the two groups - SRA and MRA allografts. Starting from April 2014 results were analysed of patients with a minimum follow up of 3 months. Drop in serum creatinine was used as an estimate to assess graft outcome. All donor nephrectomies were done laparoscopically. In a period of 12 months, 267 transplants were done, out of these robotic, pediatric, cadaveric, ABO incompatible and second transplants (55) were excluded. Rest 212 patients were included in the study (SRA-178, MRA-34) **Results:** Out of 212 patients 16% (34) were MRA allografts. Pre operative demographics were similar in two groups. Ischemia times were slightly higher in MRA group, but not statistically significant. There was no statistically significant difference in serum creatinine level at 3 month follow up (MRA 1.34 vs SRA 1.25, p 0.358). **Conclusions:** Short term kidney graft outcomes were comparable between SRA and MRA allografts. Donor kidney with MRAs expands the donor pool for renal transplantation and can be used with excellent results.

MOD 06 – 13

Outcomes of primary arteriovenous fistula for dialysis access and effect of miscellaneous factors in fistula patency: A single centre experience

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Introduction: Arteriovenous fistula (AVF) always remains a challenge to accurately predict its maturity for haemodialysis vascular access. The purpose of the study is to review the outcomes of AVF for dialysis access in terms of pre-operative assessment and effects of various factors affecting patency rates in primary AVF. **Materials and Methods:**

A total of 205 consecutive AVF formed at our institution between May 2012 to June 2015. Following surgery patient with the palpable thrill were followed. Endpoint was maturation of AVF, i.e. successful HD. Different factors such as age, gender, smoking, diabetes mellitus, previous dialysis catheter insertion and fistula location affecting the final maturation of AVF were analyzed. Results: Out of the 205 patients 151 (74%) were males and 54 (26%) females. The mean age was 40 years. Fistula failed to mature in 26 (12.7%) patients. No palpable thrill noted in 12 (5.8%), 8 (3.9%) and 6 (2.9%) on same day postoperatively, on 7th day and at 6 weeks respectively. 15 out of 26 (65.2%) who failed primarily were diabetics. The other causes for the failure were pseudo aneurysms and infection. Conclusions: The main factors leading to failure of primary arteriovenous fistula patency were diabetes mellitus and previous catheter insertion but many factors are still ill defined and there is a limited ability to predict surgical vascular outcomes. Clinical examination and DUS measurements are the mainstays of current preoperative assessment.

MOD 06 – 14

En-bloc (dual) kidney transplant from a 16-month old brain-dead donor to an adult recipient: A Case report and literature review

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Introduction: Transplantable organs from pediatric donors have been contributing significantly to donor pool worldwide. However, this is a rarity in India, where deceased-donor organ donation is still in its infancy. We report multi-organ harvesting from a 16-month old brain dead donor and implanting both kidneys en-bloc in an adult male. **Case Report:** 16-month old child was declared brain dead following head injury. His liver and both the kidneys were harvested en-bloc. 42-year old waitlisted male was found fit for transplant. The suprarenal ends of donor aorta and cava were oversewn and then their infrahilar ends were anastomosed to right external iliac vessels in an end-to-side manner. Both the ureters were anastomosed to the bladder separately over 4/16 double J stents. Results: The total ischemia time was 267 minutes. Both the kidneys were well perfused immediately after removal of clamps and there was immediate urine production. The total hospital stay was 12 days. The patient reached a nadir creatinine of 1.24 mg/dL on 11th post-operative day. He is presently on triple immuno-suppression. At 6-month follow-up, his serum creatinine is 0.98 mg/dL, DTPA GFR is 71.52 ml/min and each kidney measures 8.2 cm on sonography. **Conclusion:** With the recent increase in deceased donations in India, more pediatric donors will be available for organ harvesting. Pediatric donors are excellent resources that should be procured whenever available. The decision to perform EBKT or splitting to perform two single kidney transplants (SKT) is difficult. We report the successful outcome after EBKT from the youngest pediatric donor from India.

MOD 06 – 15

Stented versus nonstented extravesical ureteroneocystostomy in renal transplantation

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Introduction and Objectives: Kidney transplantation is the treatment of choice for end-stage kidney disease (ESKD). In kidney transplant extravesical ureteroneocystostomy is generally done using Lich-Gregoir (L-G) technique. There is a reported incidence between 3% to 5% of vesicoureteric complications which present either as urine leaks or collecting system obstruction. Both ureteric leak and obstruction have been successfully treated with “double-J” (DJ) stent insertion, prompting surgeons to contemplate the use of prophylactic stents which themselves have morbidity associated with them. Our main objective in this study was to examine the benefits and drawbacks of ureteric stenting in kidney transplants recipients.

Methods: All recipients of kidney transplantation between January 2014 and July 2015 are included in the study. Patient data was entered prospectively in the patient performa sheet as had been developed for this study and followed up. Results: 35 DJ stented (Group 1) and 25 non stented (Group 2) renal transplants were done. Stented patients had irritative symptoms in 51% vs 20% in non stented patients. Post operative urine culture was positive in 28% stented patients and 16% in non stented patients. There was no occurrence of urinary leaks or collecting system obstruction in either group. **Conclusions:** Routine DJ stenting increases the risk of urological infections and irritative symptoms in transplant recipients. Careful surgical technique is the most important factor in reducing the incidence of urinary leak and collecting system obstruction.

MODERATED POSTER SESSION – 7

MOD 07 – 01

Urethroplasty in urethral stricture disease associated with chronic renal failure: A single centre experience

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Introduction: Urethral stricture diseases associated with chronic renal failure (CRF) were uncommon in day to day clinical practice. Etiologies of CRF in urethral stricture disease were poorly understood and may be multifactorial. Surgeries in patients with deranged renal function were known to have more complications. We are sharing our experience of urethroplasty in patients of urethral stricture disease associated with CRF. **Materials and Methods:** Retrospective study. 37 patients from February 2009 to June 2014 with urethral stricture disease and CRF who underwent urethroplasty were included in study. Statistical analysis was done in study using SPSS version 16. Results: Maximum flow rate and average flow rate were increases significantly after urethroplasty. Out of 37 patients underwent urethroplasty chronic renal failure related complication occurred in 11 patients. **Conclusion:** Subjective outcome of urethroplasty in chronic renal failure were satisfactory. In present study chronic renal failure related complication occurred in 11 patients. Multidisciplinary approach was warranted for optimal management of these cases.

MOD 07 – 02

Positive surgical margins post radical prostatectomy and outcome analysis

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The primary goal of prostate cancer surgery is to provide satisfactory oncologic outcomes. Preserving the neurovascular tissue and maintaining maximal urethral length are crucial for functional outcomes. Positive surgical margins can have significant impact on postop outcome. A systematic analysis of 424 patients who underwent open radical prostatectomy for localised cancer prostate was done. We examined variables like age, PSA, Gleason score, clinical stage and its implications on margin post Radical Prostatectomy. Also clinical and biochemical recurrence was studied in these patients. Results: The overall positive surgical margin rate was 22%. PSM patients were younger, had higher PSA levels, had greater mean b-GS and higher Gleason score. PSM group showed greater pathological stage, SV and lymph node involvement.

MOD 07 – 03

When less is more: Bladder preservation in the high-risk elderly patient with TCC bladder

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Introduction and Objective: Radical cystectomy is the standard treatment of non-metastatic, muscle-invasive bladder cancer. However elderly patients with multiple comorbidities are rarely good candidates for aggressive surgical management. Treatment with trimodality therapy comprising TURBT or Partial Cystectomy followed by chemo-radiation has emerged as an option in managing these difficult patients. The aim of this study was to evaluate the outcome of bladder preservation protocols in the high-risk elderly patients with transitional cell carcinoma bladder treated at our institution. **Methods:** We reviewed the medical records including inpatient records, histopathology reports and follow up data of three elderly patients who were categorised as American Society of Anaesthesiology Score 3 or higher and had been treated with bladder preservation protocols for TCC bladder during 2010-2015. The nature of their comorbid illness, treatment given, operative notes including duration of anaesthesia and follow up data including survival data, recurrence and evidence of disease progression, health related quality of life (HRQOL) as assessed by EORTC QLQ C-30 questionnaire were recorded in all patients. **Results:** All three patients were categorised as ASA 3, two patients had double vessel coronary artery disease and one had COPD with cor-pulmonale. Stage of disease varied from T2b to T3b disease. Two patients underwent partial cystectomy with pelvic lymphadenectomy, one underwent radical TURBT. All patients received chemo-radiation postoperatively. At the time of the study all three patients were alive. Time since therapy varied from 4 years to 18 months. None of the patients had recurrence of disease in the bladder. One patient had developed bone metastasis in the pelvis. The HRQOL post therapy was acceptable in all three patients. **Conclusions:** Our study suggests bladder preservation protocols are a viable option in the high-risk elderly patient with good oncologic and HRQOL outcomes.

MOD 07 – 04

Extremely rare case of prostatic utricular cyst with urothelial carcinoma

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Introduction: prostatic utricle is a small, epithelium lined posterior expansion of the prostatic urethra. Prostatic utricle enlargement is seen in young males usually in first and second decades. it is associated with hypospadias, undescended testis and unilateral renal agenesis or intersex anomalies. Carcinoma of the prostatic utricle is extremely rare about 3%. Herein, we successfully treated one such case in our institute. **Case Report:** We report a case of prostatic utricle cyst with urothelial carcinoma in a 21 year old male, detected in an evaluation for painless hematuria. Patient born out of consanguineous marriage, had right undescended testis, penoscrotal hypospadias and digital rectal examination revealed a soft to firm growth palpable above prostate. Magnetic resonance imaging showed a normal prostate and a large utricle cyst of size 10 x 8 x 8 cm with malignant changes. Patient underwent an exploratory laparotomy and tumor was totally removed. The gross appearance and microscopic aspect was compatible with invasive urothelial carcinoma. Patient was given adjuvant chemotherapy and radiotherapy. Patients postoperative recovery was satisfactory. On followup, patient is doing good, There was no evidence of recurrence on both clinically and radiologically 6 months after surgery. **Discussion:** Carcinoma of the prostatic utricle is extremely rare about 3% in incidence. Although endometrial carcinoma, clear cell carcinoma, urothelial carcinoma and adenocarcinoma of prostatic utricle have been reported. **Conclusion:** Prostatic utricle cyst with urothelial carcinoma is an extremely rare malignancy with limited literature and we have successfully treated one such case of prostatic utricle cyst with urothelial carcinoma in our institute.

MOD 07 – 05

Restage TURBT and TURBT for small bladder tumors under sedoanalgesia: Safety and feasibility

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Introduction and Objective: Transurethral resection of bladder tumor (TURBT) is cornerstone in management of carcinoma urinary bladder (CaUB). Many patients with CaUB have to undergo multiple operations, straining our already overburdened operation waiting list and exposing patients to associated anesthetic risks. At our centre we routinely perform TURBT for single small (<3 cms) bladder tumors (SSBT) and restage TURBT under sedoanalgesia. Here we present our experience of the same. **Methods:** All patients who underwent TURBT for SSBT or restage TURBT under sedoanalgesia from 1 August 2014 to 1 July 2015 were included in the study. After cystoscopic evaluation patients were sedated with inj. Pentazocine. Deflux needle was used to give intradetrusor peri-tumor injection Xylocaine (2%) at 4-6 sites. Procedures were done using bipolar electro-cautery. **Results:** 48 patients (43 male and 5 female) had undergone 56 procedures i.e 28 TURBT and 28 Restage TURBT. Out of 29 bladder tumors 4 were sessile and 25 were papillary with an average size of 1.74 X 1.68 cms. Complete TURBT was possible in all patients except one. On biopsy all cases had deep muscle except 4. 28 restage TURBT were done, biopsy had deep muscle in all. Procedure was abandoned in two patients, because of pain. Two patients had jerk (obturator reflex) causing small perforation on lateral wall in one, managed conservatively. **Conclusion:** Most patients tolerate procedure under sedoanalgesia well, with acceptable level of side-effects in few. TURBT and restage TURBT under sedoanalgesia are feasible and safe. This concept can be extended to high anaesthesia risk patients, though further studies are required.

MOD 07 – 06

Open partial nephrectomy: Gold standard for small solitary tumours prospective study of single centre

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Introduction: Standard treatment of renal cancer has been radical nephrectomy. Partial nephrectomy has been increasingly recommended based on improved renal functional outcomes without sacrifice of oncologic effectiveness. Open partial nephrectomy was initially reserved for patients with solitary kidney or bilateral tumors; is now treatment of choice. Availability of USG and CT has increased detection of smaller, asymptomatic tumors than observed when Robson proposed radical nephrectomy. Incidental tumors have more favorable prognosis. **Materials and Methods:** From 2011 to 2015 January 28 patients with unilateral, localized, non-familial, T1 renal mass were selected. Patients' demographics, operative time, estimated blood loss (EBL), warm ischemia time (WIT), hospital stay, pre- and post-operative renal functions, complications and oncological outcomes were recorded, prospectively. Median follow-up was 19 months (range 6-38 months) Mean age 42 avg 40-69. Their clinical presentation, diagnostic modalities and surgical outcome were evaluated. 3 ended in radical nephrectomy. 24 RCC, 2 chromophobe 1 papillary and 1 complex cyst. Only 16 patients had specific symptoms. Computerised tomography (CT) was diagnostic in most of the cases. **Results:** Tumour size-17-62 mm for RCC. Mean nephrometry score was 5.2. Operative time averaged 126 minutes (range: 110-186). WIT was 20 min. The hospital stay ranged from 5-10 days (mean 6.5). Complications occurred in four cases (14.2%); 1 patient ended in CKD. there was no death. 1 patient developed recurrence after 2 years which was diagnosed on follow up and ended in radical surgery. **Conclusions:** partial nephrectomy is safe and effective alternative to radical nephrectomy. **Keywords:** Localised renal cancer, Nephrometry score, Oncologic outcome, Partial nephrectomy, Renal function

MOD 07 – 07

Xanthogranulomatous inflammation of the urachal remnants: rare presentation mimicking carcinoma

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Introduction: Xanthogranulomatous inflammation is a rare clinico-pathological condition involving many organ systems. We would like to report an unusual presentation of this inflammatory process presenting as a lesion in the urachus mimicking malignancy. **Case Report:** This 47 year old man presented with history of hematuria, dysuria, lower abdominal pain, severe OAB for 2 months. on routine evaluation found to have E. coli infection in the urine. USG scan showed diffuse thickness of bladder wall with suspicious of bladder wall tumor in the dome of the bladder. CT scan confirmed enhancing lesion above the dome of the bladder near urachus and associated multiple lesion in the bladder probably suspicious of urachal carcinoma with co existing bladder carcinoma. So planned for cystoscopy and bladder biopsy. Cystoscopy showed normal urethra, bladder showed solid lesion in the dome of the bladder. Hence resection was done and during resection it went into the cystic urachal cavity. Post op biopsy showed chronic inflammation and no evidence of cancer. Redo biopsy done also showed chronic inflammation with no evidence of cancer. MRI showed reduction in thickening and mass lesion in the urachus. Hence planned for partial cystectomy with excision of urachal remnant and carried out. HPE showed XANTHOGRANULOMATOUS (XG) inflammation of the urachal cyst. **Conclusion:** The aim of the presentation is that XG mimicked exactly like carcinoma but it turned out to be benign. Even though rare anybody having urachal lesion should be treated like a malignancy rather than XG as still carcinoma is more common.

MOD 07 – 09

Prediction of recurrence and progression in NMIBC: Our experience

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Introduction 70% of urothelial carcinomas are NMIBC and 50% of them are low grade, noninvasive and papillary tumors. Approximately 50-70% of NMIBC have a recurrence within 5 years and 5-20% progress to invasive tumors. We determined the recurrence and progression at 1 year in patients with NMIBC according to EORTC model. **Materials and Methods:** Retrospective study of 118 patients between January 2010 and May 2014, who underwent TURBT. Data collected for age, gender, prior recurrence rate, number of tumors, tumor size, cancer stage, presence of CIS, WHO grade, intravesical treatment, recurrence, and progression of bladder tumor according to EORTC models. **Results:** The patient's mean age was 56 years (range, 23–84 years) at the time of diagnosis with median follow-up was 28 month. Single tumors in 79 (66.94%) and multiple in 22 (18.64%) patients. Tumor size <3 cm in 80.50% and >3 cm in 19.49% patients. CIS was observed in 11 (9.32%) pt. Patients with G1 disease were 79 (66.94%), G2 - 12 (10.16%) G3 - 27 (22.88%). A total of 110 patients (93.22%) received BCG instillation. BCG toxicity was seen in 61.01%. Recurrence was seen in 21 patients (17.79%) in which 45.45% had Ta, 15.38% had T1 tumor. **Discussion:** As the tumor grade, multiplicity increases the chances of recurrence are high. In our study 45.45% recurrence was seen in Ta tumor in comparison to 21.1% in EORTC and 46.75% in T1G3 tumor in comparison to 23.8% at one year of follow up.

MOD 07 – 10

Clinical, demographic and histopathological prognostic factors for urothelial carcinoma of the bladder

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Introduction and Objective: Urothelial carcinoma of the bladder (UCB) is the second most common genitourinary malignancy. Radical cystectomy (RC) with bilateral pelvic lymph node dissection (PLND) is currently the gold standard treatment for muscle-invasive UCB. Some bladder cancer cases of similar stage and grade have demonstrated variable clinical outcomes after RC, so many attempts have been made to determine new and reliable prognostic factors. The aim of the present study is to evaluate the influence of clinical and histopathological parameters, including age, gender, tumor stage, grade, tumor differentiation, necrosis,

lymphovascular invasion (LVI) and concomitant carcinoma in situ (CIS), on outcomes of patients with UCB. **Materials and Methods:** A total of 72 patients who underwent RC for muscle-invasive bladder cancer at our hospital between 2008-2014, were included in the study. **Results:** The mean age of patients at diagnosis was 58.4, of whom 60 were males. Of the 72 patients, 34 were ≤60 years. There were 22 cases which showed divergent differentiations. Concomitant CIS was observed in 19 tumors, 35 cases showed tumor necrosis and 52 LVI. The rate of overall survival (OS) in patients aged ≤60 years was statistically significantly higher than in those aged >60 years. A negative statistical relationship was found between OS with lymph node metastasis (LNM) and tumor differentiation. **Conclusions:** In this study, advanced age, LNM, tumor differentiation were found to be independent prog-nostic risk factors associated with OS after RC. These additional factors should be taken into consideration in treatment planning of UCB.

MOD 07 – 11

Renal cell carcinoma factors that determine the pattern of distribution, prognostication and its peculiar associations with other synchronous malignancies: Single center experience

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Aim: To assess the various factors that predispose to the occurrence to RCC, their pattern of distribution and the various prognostic factors that decide the treatment outcome. To also highlight the diverse peculiar associations with synchronous malignancies in other organs. **Patients and Methods:** A retrospective study of all consecutive patients who presented to us in our in-patient department with renal neoplasm over the past three years, from July 2012 to June 2015. All the patients managed and followed up by us were included in this study. Each of the parameters listed in the aims and objectives were individually assessed and analysed. Various peculiar associations of RCC with other synchronous malignancy in other parts of the body were listed out and described individually. **Results:** A total of 223 patients were identified to have renal neoplasms. This included all patients with Bosniak Category III and IV as well. Of these, 56 (25%) were found to have renal cell carcinoma. Four of them were bilateral synchronous RCCs. Males were predominantly involved, constituting to about 80% of the total (n = 45). About 85% of them were chronic smokers. Two patients had a family history of RCC. The median age of involvement was 60, and the male – female ratio was 4:1. Of the 56 patients with RCC, 52 of them underwent Radical Nephrectomy. About 90% were of clear cell variety and 78% of them had high grade tumors (Fuhrman grading). One patient had unilateral RCC and contra-lateral Transitional cell carcinoma of the renal pelvis. Another patient had unilateral RCC and Sigmoid colon adeno-carcinoma. The third patient had unilateral RCC and uterine endometrial carcinoma. The fourth patient had a huge hilar mass, extending from the lower pole towards the hilum, lifting up the IVC and the aorta. Four patients had bilateral synchronous malignancies

MOD 07 – 12

Renal cell carcinoma with caval thrombous: Our experience

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Patients and Methods: We analysed prospectively Fifteen patients who presented to us with Renal cell carcinoma associated with various levels of caval involvement from the period of august 2011 to July 2015. Various clinical parameters such as Age, Volume of tumour, Haemoglobin, serum corrected calcium, and the level of tumour extension into the IVC were evaluated. **Results:** Patients who presented with Tumour Thrombus infiltration into the Vena caval wall and those with large tumour volume,

Extensive Loco regional disease seems to have a higher peri operative morbidity. The level of thrombus extension is significantly associated with disease recurrence. Effective adjuvant therapy is needed to improve outcome in this patient population

MOD 07 – 13

Prostatic sarcomas in young age: A rare presentations

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Prostate malignancy is second most common cancer in elderly men. However most of it are adeno-carcinomas. Prostatic sarcomas are rare and account for only 0.1-0.2% of prostatic malignancies. Here we report two unusual cases of young adults of mid thirties presenting with acute lower urinary tract symptoms with features of acute prostatitis. Both these patients had abnormal digital rectal examination which forced us further characterize. Also both patient had increase in prostatic size (doubled) within short period of 3 weeks. Patient was further evaluated with biopsy and MRI pelvis was diagnosed as prostatic sarcoma one having malignant histiocytosarcoma and other rhabdomyosarcoma. Immunohistochemistry helped us to come to a definite diagnosis. Surgical excision of the tumour with oncological principles was possible in only 1 case while other could not be salvaged. Prostate sarcomas are highly aggressive, with limited therapeutic options. We reviewed the cases of prostate sarcomas available in literature to clarify the best therapeutic options to be applied. Timely complete excision remain treatment modality of choice. However prognosis is poor.

MOD 07 – 14

Changing trends in renal tumor surgery

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Introduction: We have analyzed the changing trends in surgical treatment of renal tumors over the last decade with regard to age incidence, presentation, incidental detection, and histopathology. Methods: Records of renal tumors were analyzed to see change in surgical pattern in last decade. The data was split into 2 parts (cohort) based on five year time period. Cohort 1 from 2006-2010 and cohort 2 from 2011 to 2015. For cohort 2 a comparative study was also performed with regard to age incidence, presentation, incidentalomas, histopathology, and management with statistical analysis. Results: Total 445 nephrectomies were done. In cohort 1 175 (87%) were radical and 27 (13%) were partial nephrectomy. In Cohort 2 178 (71.7%) underwent radical and 70 (28.2%) partial nephrectomy. In cohort 1 robotic approach was used in 21 (12%) in comparison to 7 (3.9%) radical nephrectomy in cohort 2. 5 (22%) partial nephrectomies were done by robotic approach in cohort 1 which increased to 24 (34.3%) in cohort 2. Common histopathology was clear cell carcinoma and papillary RCC. 8% were benign, oncocytoma being the commonest. There was no difference in gender ratio, histopathology and age with regard to type of surgery. 30% of tumors were incidentally detected which in partial nephrectomy group were 60% in comparison to 20% in radical nephrectomy group ($p = 0.001$). Tumors resected by partial nephrectomy were smaller (4.4 cm) than those resected by radical nephrectomy (8.3 cm). Conclusion: Due to detection of early stage incidental tumors and gain in experience in minimally invasive surgery there is increasing trend towards NSS for renal tumors.

MOD 07 – 15

Nephron sparing surgery for appropriately selected renal tumours: Our experience

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Introduction: The role of nephron sparing surgery in treatment of kidney tumour is well defined. This study is to share our experience in managing kidney tumours with open and laparoscopic nephron sparing techniques. Materials and Methods: From April 2012 to June 2015, 20 cases of renal tumor were managed with partial nephrectomy. Mean Age was 52

(40-70 yrs). There were 13 males and 7 females in this group. 14 tumours were in Left kidney. Mean tumour size was 4.5 cm (2.6-7.5 cm). 17 patients underwent laparoscopic partial nephrectomy and 3 with open technique for large complex tumours. In laparoscopy group 10 cases were done with en mass hilar clamping and 7 cases with artery only technique. In open technique surface cooling with artery only clamp technique was used. Perioperative data, clinicopathological variables, complications and oncological outcomes were reviewed. Results: Median followup of cases was 20 months (4-36 months). Patients in Lap group had smaller and exophytic tumour, higher e GFR and required longer operative time, median (230 min). The median blood loss was 200 ml comparable in both groups. None of the patients required blood transfusion. Histopathology was T1a & T1b clear cell carcinoma in 15 patients. Others were Cystic teratoma, AML, oncocytoma, Chromophobe tumours. In one case margin was focally positive. No local recurrence and Metastasis was seen so far on followup. Conclusion: The surgical approaches open vs laparoscopic both are acceptable and comparable in terms of operative and functional measures. The choice of procedure depends on the Expertise and complexity of the case.

MODERATED POSTER SESSION – 8

MOD 08 – 01

Poor compliance for lifestyle modifications and its significance in recurrent stone formers with recommendations for improvement

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Aim: To analyse cause for poor compliance to lifestyle modifications and medical treatment in recurrent stone formers. To give recommendations for improvement. Methods: 60 recurrent stone formers between January'13 to January'15 were interviewed with multi-dimensional questionnaire to evaluate compliance. Factors included are shown below with each factor having 3 sub-factors. High risk stone formers were excluded. Factor studied Related sub-factors 1 Socio economic (a) income level (b) education level (c) cultural/lay beliefs 2 Patient related (a) knowledge of disease (b) motivation (c) lack of family support 3 Therapy related (a) treatment duration (b) immediacy of beneficial effects (c) side effects of drugs 4 Health care system related (a) doctor's communication skill (b) doctor's qualification (c) long distance to treatment center 5 Disease related (a) symptom severity at first attack (b) associated co-morbidities (c) presence of disability caused Results: All sub-factors in patient related & therapy related factors were significant. Low income and low level of education were not significant. Combination of certain factors was also significant: (1) Poorly motivated patient with cultural/lay beliefs (2) poorly motivated patient treated at a peripheral health centre (3) poor knowledge of disease with co-morbidities Conclusion: Patient related and therapy related factors were major factors responsible for poor compliance. Association of certain factors (as enumerated above) was also significant. Doctor must impart knowledge about the disease besides cure. General practitioners must be educated and updated regularly on stone disease. Electronic and print media must be engaged to change cultural and lay beliefs of society.

MOD 08 – 02

Outcome of semirigid ureteroscopy with pneumatic lithotripsy in upper ureter stones

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Introduction and Objective: Ureteroscopy (URS) is favoured approach for mid-distal ureteral stones while SWL (shock wave lithotripsy) is preferred for upper ureteral stones. Flexible ureteroscopes and laser has evolved into more efficacious modality. However, due to non-durability and high expenses their availability is limited. Pneumatic lithotripter is economical with no thermal sequelae. So, We have evaluated the outcome of semirigid ureteroscopy with pneumatic lithotripsy in upper ureteric stones. Materials and Methods: 100 adult patients with upper ureteric calculus of size 6 to

25 mm had undergone ureteroscopic pneumatic lithotripsy over one year. Stone size, location, duration of surgery, complications, retropropulsion, cause of failure were recorded & analysed. Results: 100 cases with male: female = 2:1 in age group of 18-66 yrs were studied. Overall stone clearance rate was 81%. Right to left side stone ratio was 1.1:1 and that of location (transverse process of 3rd lumbar vertebra) >L3: L3 (P < 0.001). No statistically significant association between stone size and clearance (p = 0.661). On multiple regression analysis there was significant association of stone size and location with time to clearance of stone (p < 0.001). Conclusion: Semirigid ureteroscopy with pneumatic lithotripsy is safe with good clearance rate depending on location of stone.

MOD 08 – 03

Management of large upper ureteric calculi: Role of semirigid ureteroscope with laser lithotripsy

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Introduction and Objectives: Different methods with their advantages and disadvantages are being used for managing large upper ureteric calculi. Ureteroscopy with laser lithotripsy is a safe and effective method of treating these calculi, especially in patients with different co-morbidities where other methods may not be effective or may not be applied at all. This study was conducted to evaluate efficacy and safety of Ureteroscopic laser lithotripsy in upper ureteric calculi of size 1 cm or more. **Methods:** The study was conducted as a prospective study during March 2013-September 2014. All patients were evaluated preoperatively as per the protocol. Ureteroscopy and laser lithotripsy using 6/7.5 fr semirigid ureteroscope and Holmium laser was done. Stenting was done according to the merit of the case. The stone clearance rate, immediate and at 3 months, was recorded. The complication were recorded. **Results:** 105 patients with 122 calculi were included in the study. 15 patients had bilateral stones and 2 patients had multiple stones on one side. 74.3% patients had co-morbidities, 64.8% elective and 35.2% emergency patients. Out of 122, 120 stones were accessed. Immediate stone clearance was 91% and stone clearance at 3 months was 93.5%. There was one major complication. 23.8% patients had minor complications. Ancillary procedure were required in 6.7% patients. Mean hospital stay was 2.23 days. Readmission rate was 3.3%. **Conclusion:** Ureteroscopic laser lithotripsy is effective and safe method of managing large upper ureteric calculi.

MOD 08 – 04

Flexible ureteroscopic holmium laser lithotripsy using high frequency stone dusting for treating renal stones: Our initial experience

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Introduction: Holmium lithotripsy is the modality of choice for RIRS. Most surgeons use low wattage (20W) for stone clearance but that may lead to increase in operative time and incomplete stone clearance. **Materials and Methods:** A total of 15 patients with a total renal stone bulk of 2-4 cm underwent flexible ureteroscopic holmium laser lithotripsy using high frequency stone dusting with energy and frequency settings of 0.3-1 Joules and 35-80 Hz (40W). The end points in the study were total lasing and procedure time, use of accessories for stone clearance, stone clearance at 1 month follow up and use of auxiliary procedures for stone clearance. **Results:** The average number of stones in each renal unit was 1.53 ± 0.7 . The average stone bulk was 4734 ± 2387 cc. The average lasing time and total operative time was 21 ± 14 minutes and 39.3 ± 12 minutes respectively. One patient had staghorn with secondary calculi, 10 had stones in pelvis and single calyx whereas 4 patients had multiple calyceal calculi. 33.3% (5/15) patients had residual fragments larger than 2 mm intraoperatively. The initial complete clearance rate at 1 month follow up was 73.3% (11/15) which improved to 100% with subsequent auxiliary procedures. PCNL, RIRS and a combination of RIRS and PCNL was employed for subsequent stone clearance. **Conclusion:** High frequency flexible ureteroscopic holmium laser stone dusting is an efficient method of treating intrarenal calculi with high clearance rate.

MOD 08 – 05

ECSWL: Calculating the optimum number of shock waves and optimum stone parameters on ncct for calculus fragmentation

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Introduction and Objective: For renal/ureteric calculi, different guidelines have been adopted to select patients for their utmost benefit from ESWL. Although size of the calculus is one of the important parameters, it alone cannot be considered the sole determinant anticipating ESWL success. **Methods:** From January 2014 to January 2015, 78 patients diagnosed with renal/ureteric calculi using non contrast computerised tomography scanners were included in the study. For disintegration of calculi, maximum energy level of 2, 2500 shocks for renal and 3000 shocks for ureteric calculi in each session, at a rate of 60 SWs/min for renal and 90 SWs/min for ureteric calculi was used. Stone clearance was assessed every 2 weeks using x-ray or ultrasonography, upto a maximum of 3 sessions. ESWL success was defined as attaining a stone-free status or presence of <3 mm fragment on ultrasonography or no visible radio-opaque shadow on x-ray. **Results:** Of the 78 patients, 42 had renal and 36 had ureteric calculi. In patients with renal calculi, the diameter of the stone (mm) varied from 4.8 – 17, HU 147 – 1543.8, SSD (cm) 4.71 – 15.24. For ureteric calculi, diameter varied from 4.4 – 14 mm, HU 256.8 – 1244.6 HU, SSD 8.6 – 15.3 cm. We could demonstrate that, with increasing HU (over 1000) and SSD (over 10 cm), there was increase in the number of sessions required for fragmentation. **Conclusion:** With the advent of NCCT, the patient with optimum stone characteristics, who can benefit the most can be categorised. In our study, HU <1000 and SSD <10 cm achieved faster stone free status.

MOD 08 – 06

Effectiveness of medical therapy in overcoming the ureteral double-j related symptoms

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Introduction: Endoscopic placements of double J stents has become a routine practice in urology. Although safe and well-tolerated, it has its own complications and morbidity. The purpose of the study was to investigate whether lower urinary tract symptoms (LUTS) increased in patients in whom double-J stents were inserted. We also evaluated several medical therapy to treat these symptoms related with ureteral stents. **Methods:** Total 138 patients (82 male and 56 female), in whom unilateral D/J stenting was done after ureteroscopic lithotripsy from July 2013 to June 2015 were included. All patients were evaluated with IPSS and OAB forms and scores were calculated before the procedure. After that patients were randomized into 5 groups-Anti-inflammatory (Diclofenac 50 mg BD) to group 1, Spasmolytic (Hyoscine 10 mg BD) to group 2, Alpha blocker (Tamsulosin 0.4 mg ODHS) to group 3, Anticholinergic (Solifenacin 5 mg ODHS) to group 4, Placebo to group 5. After 4 weeks, IPSS and OAB forms were again completed and scores were compared with previous one. **Results:** After evaluation, it was seen that IPSS and OAB scores were significantly higher in whom double J stent was inserted. Although medications caused a general improvements of symptoms, none of medical therapy was effective in preventing the increase in score. **Conclusion:** Lower urinary tract symptoms (LUTS) increased in whom double J stent was inserted. It is very difficult to get rid of these symptoms even with different medical therapies. Symptoms subside only with removal of the double J stent. So we should be judicious in using these stents after ureteroscopic lithotripsy.

MOD 08 – 07

Effectiveness of intrarectal diazepam as analgesia in extra corporeal shock wave lithotripsy

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Introduction and Aim of the study: To find out the effectiveness of intrarectal diazepam suppositories as added analgesia in extra corporeal

shock wave lithotripsy **Materials and methods:** Fifty two patients with solitary calyceal or pelvic stones were selected for the study and were divided into two groups and underwent ESWL under fluoroscopy guidance of c-arm. All patients received 3000 shocks at 16 kV with stone position checked with c-arm every 300 shocks. All patients in group 1 (n = 26) received 100 mg diclofenac and 500 mg paracetamol suppositories along with local application of eutectic mixture of prilocaine and lignocaine at least 30 minutes prior to the procedure. In addition to the above patients in group 2 (n = 26) received 10 mg of diazepam suppository intrarectally. No other injectable analgesics were used during the procedure. The pain score during the procedure and immediately after the procedure using Visual analogue scale (VAS) ranging from 1-10, duration of fluoroscopy and number of times the stone position was re assessed after patient movements and post procedure analgesic requirements were analyzed. Overall patient satisfaction was assessed by a five point questionnaire. **Results:** The pain during and immediately following the procedure were significantly lower in patients receiving intrarectal diazepam. On average patients in group 1 moved more during the procedure, needing more re focusing of the stone and consecutively more fluoroscopy time. Post procedure analgesic requirement was also low in group 2. **Conclusion:** The addition of intrarectal diazepam improves the tolerance of the procedure in patients during ESWL.

MOD 08 – 08

Therapeutic options for proximal ureteric stone-extracorporeal shockwave lithotripsy versus ureteroscopic pneumatic lithotripsy: Comparative study

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Introduction and Objective: The optimal treatment modality for proximal ureteral stones of various sizes has not yet been defined. Treatment decision depends upon stone factor, availability of treatment modality, patient preference, and doctor's attributes. Our aim is to compare the safety and cost-effectiveness of ureterorenoscopic pneumatic lithotripsy (URSL) with extracorporeal shock wave lithotripsy (ESWL) for proximal ureteral stones. **Methods:** We assessed 78 patients with upper ureteral stones (<15 mm). In ESWL group 40 patients were treated on OPD basis using Dornier compact lithoclast. URSL was performed in 38 patients with a Storz semirigid ureterorenoscope and pneumatic lithotripter under spinal anesthesia. Successful outcome was defined as patient being stone free on radiography 1 month after treatment. The stone size, success rate, postoperative complications, and cost were evaluated in each group. **Results:** The mean no of session was significantly higher in ESWL group (1.5 vs 1.04) as compared to URSL. Initial stone free rate was higher in URSL group 75% vs 67% in ESWL group. But overall 82% patient in ESWL arm were stone free with subsequent session as compared to URSL group where about 25% required secondary procedures. Most common complications in ESWL group were pain & haematuria & UTI in URSL group. **Conclusion:** URSL achieved excellent initial stone free results, can be the first-line therapy for proximal ureter stones. ESWL has better stone free clearance with subsequent sessions. ESWL should remain first line therapy for <1 cm calculi because of no anaesthesia & less morbidity.

MOD 08 – 09

Impact of age on efficacy of ESWL: Institutional study

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Aim: The study was to evaluate the impact of age on the efficacy of extracorporeal shock wave lithotripsy. **Materials and Methods:** We compared the effect of ESWL on a cohort of patients aged more than 65 years with respect to treatment outcomes, complications and need for adjuvant procedures with patients aged less than 65 yrs. **Prospective study - Jan 2014 to July 2015.** Total cases – 1060 Study group – 485 Age >65 yrs – 64 cases Age <65 yrs – 421 cases **Diagnosis** of urolithiasis was confirmed by either IVU or CECT. Patients were treated on a Dornier Delta II lithotripter. The ESWL protocol included administration of shock waves under Ultrasound or fluoroscopic guidance at a rate of 60 shocks/min. **Conclusion:** ESWL is still one of the first-line tools for geriatric patients suffering from urolithiasis, as increased age alone does not seem to adversely affect the efficacy of ESWL. Appropriate patient selection is

important to achieve a high stone-clearance rate. Presence of significant stone burden in the elderly need multiple ESWL sessions.

MOD 08 – 10

Pediatric urolithiasis: An experience of single centre

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Introduction: The aim of this study was to evaluate the clinical features and metabolic and anatomic risk factors of urolithiasis in children at our hospital. **Materials and Methods:** Between 2014 and 2015, a total of 22 children (15 girls and 7 boys) had been treated because of urolithiasis. Clinical presentation, urinary tract infection, calculus localization, family history, presence of anatomic abnormalities, and urinary metabolic risk factors were evaluated, retrospectively. **Results:** The children were between 3 years and 13 years of age (mean age, 8 ± 1.61 years). The calculus diameter was 3.2 mm to 31 mm (mean, 7.31 ± 4.64 mm). In 90.6% of the cases, the calculus was located only in the kidneys and in 2.4% it was only in the bladder. The most common presentations were urinary tract infection, restlessness, and abdominal pain. A positive family history of urinary calculi was detected in 27.3%; urinary tract infection, in 23.8%; and anatomic abnormality, in 10.7% of the patients. Metabolic evaluation, which was carried out in 20 patients, revealed that 52.6% of them had a metabolic risk factor including normocalcemic hypercalciuria (21.7%), hyperuricosuria (11.5%), cystinuria (3.8%), and hyperoxaluria (5.1%). **Conclusions:** We think that urolithiasis remains a serious problem in children in our country. Family history of urolithiasis, urologic abnormalities, especially under the age of 5 years, metabolic disorders, and urinary tract infections tend to be associated with childhood urolithiasis.

MOD 08 – 11

Differences in urinary stone composition according to body habitus

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Objective: To analyse difference in urinary stone composition according to body mass index (BMI). **Materials and Methods:** Between October 2014 and July 2015, 106 ureteral or renal stones collected from 106 patients who underwent surgical intervention. patient's age, gender, BMI, urinary pH, and stone composition were the data collected. **Results:** The patients' mean age was 49.3 years (range, 20 to 83 years). Of the 106 patients, 44 (41.5%) were obese, of 56 male 22 (45.2%) were obese. According to stone composition, 41 (38.6%) had calcium oxalate (CO) stones, 35 (33.01%) had mixed calcium oxalate and calcium phosphate (COP) stones, 16 (15.1%) had calcium phosphate (CP) stones, 11 (10%) had uric acid (UA) stones, and 3 (2.8%) had struvite stones. Struvite stones in the statistical analysis excluded because of the small number of patients. In the multinomial logistic regression analysis, obesity was found to be associated with Uric acid stones compared with mixed calcium oxalate and calcium phosphate (COP) stones and calcium phosphate stone. Similar results were observed for CO stones compared with COP stones and CP stones. **Conclusions:** Obesity was more associated with Uric acid and calcium oxalate stones when compared with the occurrence of mixed calcium oxalate and calcium phosphate (COP) and calcium phosphate (CP) stones.

MOD 08 – 12

Utility of ESWL therapy for upper ureteric calculi of 1-2 cm size

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Introduction: Generally, upper ureteric calculi <1 cm are either treated with URSL (Ureteroscopic Lithotripsy) & ESWL (Extracorporeal Shock Wave Lithotripsy). However, ESWL is a modality of less morbidity and can be tried for larger calculi though this is beyond the purview of conventional guidelines. We present our study which assessed the utility of ESWL in calculus of 1-2 cm size. **Materials and Methods:** 113 patients with single

non-impacted upper ureteric calculus of size between 1-2 cm underwent ESWL therapy at Department of Urology. Out of these 67% had single session and rest with two sessions of shock wave therapy. All patients were stented before therapy. All the patients had undergone NCCT-KUB to assess for stone size & stone density assessment. All these stones had density less than 1000 HU. Stone clearance of ureteric calculi was assessed at the end of two weeks. Data were analysed with appropriate statistical measures. Results: 113 patients (44 females and 69 males) between the age 18 to 61 years underwent ESWL of which 67% underwent single session and rest underwent two sessions and 81.4% had their calculi cleared and 18.6% had unsuccessful outcomes. Patients with unsuccessful outcome subsequently underwent URSL. 4.7% developed steinstrasse which was treated conservatively. 2.7% patients developed haemorrhage (mild) and another 3.53% developed UTI. Conclusion: ESWL is a safe, effective, non-invasive and convenient modality for 1-2 cm single non-impacted upper ureteric calculus with less than <1000 HU and can be used as first-line therapy.

MOD 08 – 13

Metabolic evaluation in patients with recurrent urolithiasis: Results from South India

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Urolithiasis has a lifetime recurrence rate of 80%. Studies have shown that patients are interested in knowing reason for stone disease and the ways to prevent recurrences. Metabolic Evaluation in western countries have shown at least one identifiable and treatable abnormality in more than 90% patients. Twenty Four hour urinary collection and examination are essential part of metabolic evaluation. Most authorities and guidelines recommend that two or more 24 hour Urine specimens need to be collected and analysed. Despite these recommendations there are limited study from India. To best of our knowledge there is no or few published south Indian study. We here by present our results of metabolic evaluation of 46 patients from south India. Aim: To Study various metabolic abnormalities in patients with Recurrent Urolithiasis. Materials and Methods: We recruited all the consecutive consenting patients presenting with recurrent urolithiasis at our Hospital. Blood parameters assessed were CBP, Serum Glucose, Serum Sodium, Serum Potassium, Serum Chloride, Urea, Creatinine, Serum Calcium, Serum Phosphorus. 24 Hour urine was analysed twice for Volume, pH, Osmolality, Calcium, Oxalate, Phosphate, Sodium, Potassium, Creatinine, Uric acid, Citrate, C/S. & CUE. Data was collected in specially designed proforma. Data Analysis: Data was Processed by Windostat Version 9.2 from indostat services, Hyderabad Licensed to deVGen Seeds & Technologies Pvt. Ltd. HYDERABAD. Results: In total 46 patients participated in study. In all (100%), there was a metabolic abnormality which was detected by either first 24 hour Urine Examination or 2nd 24 hour Urine Examination. Blood parameter abnormality is usually not present in otherwise healthy recurrent Stone formers. Hypocitraturia is most common abnormality in 24 hour urine in recurrent Urolithiasis in South Indian recurrent stone formers (80% in present study). Low urinary Volumes (56%), Hypomagnesuria (51%) and Hypercalciuria (46.67%), Hyperoxaluria (28.89%) are other major 24 hour urinary parameters that were commonly abnormal. Conclusion: Our protocol-based metabolic evaluation reveals high prevalence of metabolic abnormalities in recurrent stone formers, and hence proposes that this protocol may be applied in routine clinical practice.

MOD 08 – 14

Tract creation in percutaneous nephrolithotomy: Single versus serial dilatation

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Introduction and Objectives: Percutaneous nephrolithotomy is one of the procedures of choice for renal calculi, and there are several techniques for tract dilatation. However there is a paucity in indian literature on single dilatation techniques. This study aims to analyse the feasibility and morbidity

of single step acute dilatation and to compare it with amplatz sequential dilatation technique, for tract creation in percutaneous nephrolithotomy. Methods: This study was a randomized controlled trial conducted in Urology department between August 2014 and March 2015. 60 patients satisfying the inclusion criteria were selected and were randomized into two groups of 30 patients each, and for tract creation during percutaneous nephrolithotomy, serial dilatations were done in one group A and single dilatation was done in group B. Xray exposure time, blood loss, post operative complications, duration of stay and need for ancillary procedures like extracorporeal shock wave lithotripsy were taken into account to measure the outcome. Results: Mean Xray Exposure Time was 92.9 seconds in group A, and 29.43 seconds in group B. 4 patients in group A and 2 Patients in group B required transfusions. Mean hospital stay was 4.5 days in group A and 4.3 days in group B. 3 patients in group A and 2 patients in group B, required ESWL. Conclusion: Xray exposure was significantly less in single step acute dilatation technique, while there was no significant difference in other outcome measures, between the two groups.

MOD 08 – 15

Benign renal schwannoma

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Schwannomas are rare tumours that originate from the neuralsheath and are usually located in the head and neck, extremities, and posteriormediastinum. Although 3% of schwannomas occur in the retroperitoneum, involvement of visceral organs is extremely uncommon. Schwannomas of the kidney are rare, with only a few reported cases and are often diagnosed after surgical excision. A 50-year-old woman presented to our hospital with left sided abdominal pain with sonography showing a well defined lesion in the upper pole of the left kidney. The final pathologic diagnosis was a benign renalschwannoma. Schwannomas are rare renal tumours with usually benign behaviour. Due to nonspecific symptoms and limited radiologic features for the diagnosis and assessment of the benign or malignant character of the tumour, the therapeutic approach is similar to other renal tumours. The definitive diagnosis is achieved with the help of histopathological examination

UNMODERATED POSTER SESSION - I

UMP 01 – 01

Conn's adenoma with resistant hypertension - A surgically correctable form of primary aldosteronism

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Introduction: Primary aldosteronism is characterized by systemic hypertension, suppressed plasma rennin activity, elevated plasma aldosterone concentration, may or may not be associated with hypokalemia. It is caused by bilateral idiopathic hyperplasia in approximately 2/3 of cases and Conn's adenoma in 1/3 of cases. Surgically correctable forms of primary aldosteronism are characterized by unilateral aldosterone hypersecretion like Conn's adenoma. Case Report: A 33 year old female presented with incidentally detected resistant hypertension for 4 months. She was hypothyroid on medication. On examination her BP was 140/90 (on 4 drugs). Rest all parameters were within normal limits. On investigation, BRE, RE of urine, LFT, RFT, TFT, Blood sugar were within normal limits. Mild hypokalemia was present. Plasma rennin activity was low with increased serum aldosterone level leading to increased ARR. Radiologically USG, renal doppler and CECT were within normal limits. MRI showed a 17 x 7 mm nodular lesion arising from medial limb of right adrenal gland that is isointense on T1WI and slightly hyperintense on T2WI. Laproscopic right adrenalectomy was done. Post operative period was uneventful. Patient was discharged with normal blood pressure of 130/80 mm Hg (on single anti hypertensive drug) and normal potassium level. Conclusion: Primary aldosteronism is highly prevalent in patients with drug resistant hypertension. Unilateral adrenalectomy cures hypertension in about 50 to 70% patients with aldosterone producing adenoma and can markedly ameliorate hypertension in rest.

UMP 01 – 02**Symptomatic non-functional large adrenal myelolipoma managed by laparoscopic adrenalectomy: a case report****Gupta Avneet, Manohar CS, Nagabhushan M, Shivalingaiah M, Keshavamurthy R**

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Introduction: Adrenal myelolipoma is a rare benign tumor with a reported incidence at autopsy less than one percent. It usually composed of mixture of mature adipose tissue and extramedullary triple lineage hematopoietic elements resembling bone marrow. This tumor is non-functional and hence mostly detected incidentally either at autopsy or at radiological investigation for other conditions. We are reporting a case of symptomatic non-functional unilateral large adrenal myelolipoma. **Case Report:** A 42 years old male presented to us with complaints of dull aching right sided flank pain for about 3 months duration. On ultrasound of abdomen he was found to have a right suprarenal mass, which was well defined and hyperechoic. Patient was further evaluated with contrast tomography scan, which revealed a 7.9 x 5.9 cm well-defined, oval, solid mass arising from right adrenal gland with fat components. Serum and urinary biochemical analysis were in normal range. CT-guided FNAC was suggestive of myelolipoma. Patient was underwent right laparoscopic adrenalectomy. Postoperative period was uneventful. On histopathological evaluation gross specimen showed well encapsulated ovoid mass of 486 gram with adherent fat and multiple areas of congestion. Microscopic examination showed mature adipose tissue with blood forming elements confirming the diagnosis of adrenal myelolipoma. **Conclusion:** Accurate imaging and laboratory diagnosis workup is required for adrenal masses. Although adrenal myelolipomas are mostly asymptomatic, but large tumors may produce symptoms due to compression or hemorrhage. Large masses require surgical excision and laparoscopic surgery is an option because of faster recovery.

UMP 01 – 03**Juxta-adrenal schwannoma: A rarity****Puneet Aggarwal, Sandhu AS**

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Schwannomas are tumors originating from neural crest cells. It contain differentiated Schwann cells in stroma with little collagen. First description given by Verocay in 1908 and in 1920 subclassified by Antoni into 2 distinct histologic patterns. Adrenal schwannomas are exceedingly rare; only 33 cases have been reported in the literature. Their origin appears to be in the Schwann cells of the nerve fibers innervating the adrenal medulla. These are mostly incidentally detected. Immunohistological staining confirm the diagnosis, as tumor cells are positive for S-100 protein and vimentin. 31 year old male, incidentally detected left adrenal mass on USG evaluation for dyspepsia. Clinical examination was insignificant. 24 hrs urinary free cortisol, metanephrines and normetanephrines was normal. USG Abdomen revealed 6.9 x 5.4 cm heterogenous left adrenal mass. Contrast Enhanced CT Abdomen revealed 6.2 X 7 X 6 cm heterogeneously enhancing mass b/w the ant and post limb of left adrenal. FDG PET-CT revealed FDG Avid soft tissue mass density at anterior aspect of superior pole left kidney. He underwent Lt transperitoneal laparoscopic adrenalectomy on 04 Apr 2014. Per op there was 7 x 6 cm solid left juxta-adrenal mass. There was no local invasion or regional LN. Complete excision achieved. Histopathology suggestive of Schwannoma. Post op recovery was uneventful and follow up USG has shown no recurrence. Adrenal/Juxta adrenal Schwannoma is a very rare entity. Correctly classifying this tumour can be challenging because imaging studies are nonspecific and many entities appear similar histologically. Immunohistochemical studies and electron microscopy are two ancillary techniques can help characterize adrenal schwannomas. Laparoscopic surgery is a viable option.

UMP 01 – 04**An extremely rare origination of mature cystic teratoma from the adrenal gland in an adult female****Singh Hanuwant, Dhanuka Sashank, Maity Krishnendu, Majhi TK, Mandal TK**

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Introduction: Teratoma is a germ cell tumor which is derived from totipotential cells and originated from more than 1 and usually all 3 of the primordial germ cells. The most common sites are gonads. Primary teratomas involving adrenal glands are exceedingly uncommon in adults. Herein, We report a case with a huge size and unusual origination of a mature cystic teratoma. **Case Presentation:** A 29 years old woman presented with complain of right flank pain for six months. On abdominal palpation a huge lump was palpable with mild tenderness in the right upper abdomen. The computed tomography (CT) scan showed an encapsulated huge tumor with a mixed density and mild enhancement arising from right adrenal gland. On histopathology diagnosis of mature cystic teratoma arising from the right adrenal gland without any evidence of malignancy was made. During last one year of follow up patient is asymptomatic with no recurrence of tumor on imaging. **Conclusion:** Though primary teratoma involving the adrenal gland is exceedingly rare in adults but it should be regarded in the differential diagnosis in patient presenting with a flank pain. Histopathological examination of the resected tumor warrants a definitive diagnosis. Surgical excision of mature teratoma remains the mainstay of treatment with an excellent five-year survival rate of nearly 100%.

UMP 01 – 05**Seminal vesicular cyst presenting as acute urinary retention: A rare presentation****Joglekar Omkar V, Choudhari Rajeev**

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Introduction: Seminal vesicular cyst is reported in literature, but its presentation as acute urinary retention is a rare entity. **Aim:** To report a rare case of acute urinary retention with overflow incontinence due to seminal vesicular cyst. **Materials and Methods:** A 41 yr old male presented to emergency department with acute urinary retention of 36 hrs duration with overflow incontinence. He was immediately catheterised and on catheterisation about 1200 cc of clear urine was drained. He also gave history of infertility. He was further investigated in the form of ultrasound of abdomen which showed a suspicious lesion in prostatic urethra. Hence pt was further investigated in form of Trans rectal Ultrasound. TRUS showed evidence of large seminal vesicular cyst. Subsequently pt underwent MRI OF PELVIS which confirmed the diagnosis. Pt underwent cystoscopy and unroofing of seminal vesicular cyst. Pt was on indwelling catheter for 1 week after the procedure. On removal of catheter pt was continent and didn't have any other complaints. On further follow ups for 6 months pt was completely asymptomatic. **Conclusion:** Seminal vesicular cyst presenting as acute urinary retention can pose diagnostic dilemma and proper diagnosis and treatment is necessary for successful outcome.

UMP 01 – 06**Kallmann syndrome: A rare and treatable cause of infertility with imaging findings****Rana Pratap Singh, Khalid, Anshul, Rajesh Tiwari, Vijoy Kumar, Mahendra Singh**

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Kallmann syndrome (KS), a rare genetic disorder, refers to the association between hypogonadotropic hypogonadism and anosmia or hyposmia due to abnormal migration of olfactory axons and gonadotropin-releasing hormone producing neurons. **Case Report:** We report a case of a 20-year-old male who presented with eunuchoid body proportion, absence of facial and axillary hair and sparse pubic hair, micropenis and bilaterally descended prepubertal testes. Associated findings were hyposmia, high pitched voice. Hormonal assay showed primary hypogonadotropic hypogonadism. A male karyotype was found on analysis. Ultrasonography revealed no renal abnormalities. MRI of the brain showed hypoplastic left olfactory bulb and aplastic right olfactory bulb. These findings are characteristic of KS. Androgen replacement with testosterone was started to induce virilisation. Our patient is now on regular follow-up to monitor response to treatment.

UMP 01 – 07**To evaluate the role of extra corporeal shock wave therapy for the patients of peyronie's disease**

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Introduction: Management of Peyronie's Disease (PD), a psycho social disease, includes medical, intra lesional and surgical therapies. Extra Corporeal Shock Wave Therapy (ESWT) presents a new noninvasive modality of management. **Aims and Objectives:** To determine the improvement in mean IIEFS (International Index of Erectile Function Score), mean VAS (Visual Analogue Scale), cavernosal artery flow on colour penile Doppler and penile curvature degree post treatment. **Materials and Methods:** The study includes 30 men aged 25-65 years, who presented to Ruby Hall Clinic, Pune, with PD and had failed conservative management. Data collected included history, IIEFS, VAS, clinical examination and penile Doppler, pre and post therapy. Shockwaves were delivered by a special probe attached to a compact electrohydraulic unit with a focused shockwave source (Omnispec ED1000, Medispec Ltd, Germantown, MD, USA). The session comprises of 3 sets of 300 shock waves to the plaque (900 total), 300 shock waves each proximal and distal to the plaque. ESWT consists of 9 weekly treatment of 20 min duration at the intensity of 1. The results were evaluated at baseline and 18-24 weeks after the therapy. **Results:** ESWT improves the erectile function, and improves all the domains of IIEF ($p < 0.0001$). ESWT significantly improves post plaque cavernosal artery velocity ($p < 0.05$), reduces pain, plaque size and degree of penile curvature on erection. **Conclusion:** ESWT significantly improves penile haemodynamics in the patients of PD, thereby supporting the theory of angiogenesis. ESWT improves all the domains of IIEF. No adverse effects have been recorded in the study post ESWT.

UMP 01 – 08**Recurrent urinary stone: An exploratory study on novel herbal formulation****Suresh Patankar**

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Introduction and Objective: Recurrence of stone is a common concern for all Urologists'. Lithorisk Profile - a 24 hours urine analysis parameter is considered as Gold standard for recurrence. The treatment of choice remains limited with diuretics or oral Potassium citrate. We have developed a novel herbal combination 'Herbmed plus' (HP) for the management of recurrent stone. The results of exploratory studies of above formulation in recurrent stone patients are presented. **Methods:** HP was prepared using Crataeva nurvala and kshars of Musa paradisiaca, Achyranthus aspera and Hordeum vulgare. A prospective, exploratory, controlled study in 30 patients having recurrent stone was conducted. The patients were divided into Treatment ($n = 15$) and Control ($n = 15$) and were evaluated by Lithorisk profile (24 hrs urine) at baseline and end of the study with three months treatment. The parameters like pH, Uric acid, Calcium, Oxalates, Citrate, Sodium, Potassium, Magnesium, Phosphates and Saturation Index for CaOx were assessed. The results were analyzed by employing T-test using 2013 Graph Pad Software, Inc. **Results:** The baseline results of 24 hrs urine analysis revealed no significant difference in all the parameters between control and treatment group. However, significant difference is observed in treatment group after three months medication in values of oxalate ($p < 0.03$), calcium ($p < 0.04$), citrate ($p < 0.02$), magnesium ($p < 0.02$) and saturation index for CaOx ($p < 0.005$) as compared to the control group. **Conclusions:** The herbal formulation 'Herbmed plus' is showing promising results in correction of the parameters responsible for formation of recurrent stones. However, study in large sample size is propose.

UMP 01 – 09**HOLEP: Comparison of different techniques (two/three/ four lobes)****Avinash Dutt Sharma**

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I present my experience of 40 cases. All of them underwent HOLEP using two/three/four lobe techniques (during 2014-2015). The mean age was 62 yrs (46-82), Mean prostatic size was 72 cc (48-210), Mean preop IPSS score was 17 (8-35), Mean preop Qmax was 7.7 (2-14). Preop evaluation was done with clinical history & examination, USG (KUB + P + PVR), Uroflowmetry, Urinalysis etc. All other tests necessary for anaesthesia

were done. 100 watt Ho:YAG laser with 550 micron end firing fiber was used. Two lobe technique was used most commonly for prostatic size < 100 cc with small/moderate median lobe, Three lobe technique was used for prostatic size < 150 cc with large median lobe, and Four lobe technique was used in two cases with prostatic size > 200 cc. Mean hospital stay was 1.8 days (2-3), mean catheter removal time was 22 hrs (24-48), Mean postop IPSS score was 11 (6-17) at 01 month, and mean postop Qmax was 21 at 01 month. Main complications were - Superficial mucosal injury (02), transient incontinence (03), recatheterization (03).

UMP 01 – 10**Xanthogranulomatous prostatitis with benign prostatic hyperplasia: A rare combination****Shah VS, Tuli A, Francis SK, Mammen KJ**

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Introduction: Xanthogranulomatous prostatitis is a rare benign granulomatous inflammation of the prostate. It occasionally resembles other prostatic diseases like prostatic carcinoma and abscess. Imaging techniques are not useful in diagnosis of xanthogranulomatous prostatitis, hence it is diagnosed, only on the basis of histopathological examination of the prostate. **Case Report:** A 54 year old gentleman with systemic hypertension presented with history of acute urinary retention. He had obstructive and irritative LUTS for the past one year with recurrent acute urinary retention. Digital rectal examination revealed a firm and non-tender grade III prostate. Urine microscopy revealed 70-80 pus cells/hpf and urine culture had grown enterobacter. His routine biochemical parameters were normal and PSA was 0.013 ng/ml. Ultrasonography revealed prostatomegaly. He underwent TURP. Post operatively he had an uneventful recovery. Histopathological examination of the resected prostate tissue revealed adenofibromatous hyperplasia with xanthogranulomatous prostatitis. The patient is currently on regular follow up. **Discussion:** The characteristic feature of xanthogranulomatous prostatitis is presence of foamy macrophages in inflammatory cell infiltrate. It usually manifests in the early 60s with symptoms of LUTS. It occasionally resembles other prostatic diseases like prostatic carcinoma and abscess wherein serum PSA level is elevated. In our patient histopathological examination of the resected prostate tissue revealed sheets of foamy histiocytes also known as xanthomatous cells, mixed with a few lymphocytes infiltrating the stroma of prostatic gland revealing xanthogranulomatous prostatitis. Hence it becomes essential for the pathologist to keep in mind the possibility of this rare entity.

UMP 01 – 11**Study of correlationship of average flow rate with prostate volume in patients of benign prostatic hyperplasia****Yaser Ahmad, Ashish Rawandale-Patil, Lokesh Patni, Gautam Ladumor**

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Introduction: Benign prostatic hyperplasia (BPH) is a major factor impacting male health. Clinical evaluation to assess the presence and degree of voiding dysfunction and/or the role of BPH in its presence has an increasingly broad spectrum of treatment goals. We analysed the correlation of average flow rate with total prostatic volume in our local population. **Aims and objective:** To study the correlationship of average flow rate with prostate volume in patients of BPH. **Materials and Methods:** All patients above 50 years of age presenting in OPD with symptoms of BPH were analysed. Demographic data was studied. Patients with UTI, S. PSA > 4 ng/ml, neurogenic bladder, catheter in situ, stricture, calculus were excluded. Patients were subjected to base line investigations, voiding uroflowmetry and trans abdominal USG (probe 5 – 7.5 MHz) **Results:** The average age was 65.59 years, mean average flow rate 5.38 ml/sec and mean value of total prostate volume 34.72, (table 1). Pearson's coefficient was used. Average flow rate did not show any correlation with total prostate volume ($r = 0.16$ and $p = 0.25$) (table 2) AGE Avg. Flow prostate vol. Mean 65.59 5.38 34.72 Min 52 2 7.3 Max 84 13 93.4 r p value 0.16 0.25 Not significant **Conclusion:** In our study we observed that average flow rate did not show any correlation with total prostate volume, which is in contrary to the studies which suggests that average flow rate/peak flow rate and total prostate volume are the best predictors of obstruction.

UMP 01 – 12**Renal vein and IVC thrombosis in setting of renal abscess****Althaf Hussain, Ravichandran**

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Introduction: Acute pyelonephritis is not considered as a common cause of RVT. Here we report a very unusual and rare presentation of acute pyelonephritis in the form of renal vein and IVC thrombosis. We describe a 28 yr old lady, 2 months post partum with gestational diabetes who presented with abdominal pain and fever for the past 2 months. She was diagnosed with have right renal vein thrombosis and thrombus in the IVC (infrahepatic). **Results:** She was managed conservatively with initial percutaneous drainage of the abscess, IV antibiotics and Anticoagulation therapy. On follow up she improved symptomatically with resolution of thrombus. **Conclusion:** Renal Vein Thrombosis is a very rare complication of acute pyelonephritis and probably a late complication. Management is drainage of abscess, IV antibiotics with anticoagulation.

UMP 01 – 13**Unilateral renal agenesis with cranial blind ending ureter and ureterocele presenting as acute urinary retention in adult: A rare case report****Anchal, Ravichandran R, Harish Kumar**

Meenakshi Mission Hospital and Research Centre, Madurai, Tamil Nadu, India

Introduction: Here we share our experience with a case of unilateral renal agenesis with cranial blind ending ureter with ureterocele in adult. Only two or three cases have been reported in literature so far. **Methods:** A 16 years old male patient, presenting with lower abdominal pain and acute urinary retention, evaluated with ultrasound and CT urogram and diagnosed as right renal agenesis with blind ending ureter cranially and ureterocele at caudal end. He was managed with transurethral incision of ureterocele. **Results:** Post operatively patient voided well without any urinary symptoms. **Conclusion:** Renal agenesis with cranial blind ending ureter with ureterocele in adult is extremely rare condition. Treatment involves transurethral incision of ureterocele. Only 3 cases have been reported in the literature so far.

UMP 01 – 14**Mid ureteral diverticulum: An incidental finding****Harish Bhagchandka, Talwar Manoj, Singh Vinay**

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Introduction: Ureteral diverticulum is a rare urological entity with approximately 45 cases described in literature. These previously reported cases vary in their presentation, diagnosis and management. We describe our experience in diagnosing and managing this condition in one patient. **Materials and Methods:** A 30 years old male patient presented with complain of left ureteric colic. Physical examination revealed no abnormality. Ultrasound abdomen revealed mild left hydronephrosis with possibility of VUJ calculi. CT urography revealed a 5 mm calculus at left vesicoureteral junction and a left mid ureteral diverticulum associated with bilateral single pelvi-calyceal system. **Results:** Ureteroscopy was done to remove calculus and asses the diverticulum. The ureteral and diverticulum mucosa appeared normal on ureteroscopy. The patient was asymptomatic during 6 months follow up. **Conclusion:** Ureteral diverticula was classified by Culp into: (a) Congenital, involving all layers of ureter and (b) acquired, formed by protrusion of mucous membrane. Congenital ureteric diverticula, an aberrant development of the ureteric bud which fails to reach the metanephric tissue, are characterized as single, dilated, blind-ending branch of a bifid ureter. These diverticula are usually asymptomatic but may present with recurrent urinary tract infection, hematuria or calculus. Ureteric calculi in conjunction with true congenital diverticulum is rare with only four such cases reported in the literature. In our case, the stone was found at left VUJ and it's site of origin (kidney or diverticulum) could not be ascertained.

UMP 01 – 15**Zinner Syndrome: Rare cause of urinary symptoms in young adult male****Jaiswal A, Francis SK, Tuli A, Mammen KJ**

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Introduction: Zinner's syndrome is a triad of mullerian duct abnormality comprising of unilateral renal agenesis, ipsilateral seminal vesicle cyst and ejaculatory duct obstruction. Patients present in their third or fourth decades with infertility. Herein, we describe a unique variant of Zinner syndrome in a young adult male with predominantly urinary tract symptoms. **Case Report:** A 25-year male presented with burning micturition and irritative lower urinary tract symptoms. He had normal bilateral testes and vas deferens. Digital rectal examination (DRE) revealed a large fluctuant swelling originating around the prostate on right side. Urinalysis was normal. Ultrasonography showed absent right kidney and dilated tortuous right lower ureter. TRUS demonstrated a bulky dilated tortuous right seminal vesicle. Contrast enhanced abdominal and pelvic MRI revealed absence of right kidney, dilated right ureteric remnant which was opening at the bladder neck with a small ureterocele and a dilated tortuous right seminal vesicle. Left seminal vesicle, prostate and bladder were normal. DTPA renogram further confirmed the absence of right kidney. The patient was counseled about the chances of infertility. His LUTS were managed conservatively with α -blockers and antimuscarinics. Patient is on regular 3 monthly follow up and is currently asymptomatic. **Discussion:** We report a very rare variant of Zinner's syndrome with renal agenesis, ipsilateral ureterocele and seminal vesicle abnormality. Zinner's syndrome therefore constitutes an uncommon but important diagnostic consideration in young age when the patient presents with infertility or recurrent urinary symptoms. Modern-day imaging techniques have facilitated the early diagnosis of this entity and its management.

UMP 01 – 16**A large prostatic utricle cyst causing recurrent urinary retention and epididymo-orchitis in a young adult: A case report****Kapadnis L, Sawant A, Kumar V, Pawar P, Arya A, Tamhankar A, Kasat G**

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Introduction and Objective: Cystic enlargement of prostatic utricle, a vestigial remnant of mullerian duct, is a rare condition in males. It is present in up to 4% and 1% in newborns and adults respectively. In some cases, prostatic utricle is markedly enlarged and present as a cystic lesion in pelvic cavity posing diagnostic dilemma. Surgical correction remains challenging because the utricle is close to the ejaculatory duct, pelvic nerves, rectum, vas deferens, and ureters. Surgical manipulation can result in damage to these structures. Various techniques have been described, including open exposure by suprapubic, posterior midline transvesical; transperitoneal retrovesical; posterior midsagittal pararectal; and posterior sagittal transrectal approaches. Laparoscopic excision and endoscopic techniques have also been described **Methods:** We present a case of a young male presenting with recurrent urinary retention and epididymo-orchitis due to the large cyst. The epididymo-orchitis eventually led to scrotal abscess, which had to be drained. It was diagnosed by Ultrasound and CT scan. Patient operated by transperitoneal retrovesical approach. **Results:** Complete excision of cyst was possible with transperitoneal approach. Post operative course was uneventful. **Conclusion:** Due to rare nature of these lesions, high index of suspicion is necessary. Use of advanced imaging modalities like trans-rectal ultrasound and MRI or CT scan are useful for aiding the diagnosis. Open surgical exploration remains the mainstay of diagnosis in case of confusion. Treatment is aimed at complete excision of the cyst while preserving the important adjacent structures.

UMP 01 – 17**A large mullerian duct cyst with left renal agenesis with obstructive bladder and bowel symptoms: An unusual presentation**

Kashinatham Donthula, Yogendra Singh Gaharwar, Sathish Kumar, Swapnil Topale, Bhattaram Surya Prakash

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Introduction: Mullerian duct cyst is a remnant of the fused caudal end of the Mullerian ducts, which normally regresses in utero. It is usually small, asymptomatic, midline, cystic lesion, located behind the superior half of the prostatic urethra and connected to the verumontanum by a thin stalk. Association with symptoms and renal dysgenesis/agenesis is unusual. Various treatment modalities like open cyst excision (via various routes of approach trans rectal, trans urethral, trans abdominal), percutaneous drainage and sclerotherapy are reported in literature. We are here by reporting a symptomatic mullerian cyst treated by laparoscopic approach. **Aim:** To share an unusual case of an adult male with a large mullerian duct cyst with obstructive bladder, bowel symptoms, right hydronephrosis and left renal agenesis. **Materials and Methods:** A 50 years adult male presented to us with obstructive bladder and bowel symptoms. Physical examination revealed a boggy swelling per rectally, imaging modalities showed a large cystic lesion in the pelvis more on right side with ipsilateral hydronephrosis and nonvisualized left kidney. On laparoscopic exploration, a large cystic lesion was found adherent to bladder and prostate. The cystic lesion was deroofed, remaining mucosa fulgurated and walls were marsupialized. We will present preoperative images, intra operative findings and post operative images at the conference **Results:** Post operatively patient became asymptomatic. **Conclusion:** Symptomatic Mullerian duct cysts are rare, can present with non specific bladder and bowel symptoms. Laparoscopic debulking (deroofing) fulguration and marsupialization is an effective treatment option

UMP 01 – 18

Isolated renal pelvis injury in a hydronephrotic kidney following blunt trauma

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Introduction: Kidney is the most common urinary organ injured following blunt abdominal trauma. Pre-existing renal lesions can complicate otherwise trivial renal trauma, with hydronephrosis being the most common. Obvious symptoms and signs may be minimal or absent, making diagnosis challenging. **Case Report:** A 48 year old male presented with right loin pain following a road traffic accident. Only significant finding was tenderness of right lumbar region. A contrast enhanced CT scan abdomen revealed a large right kidney with severe hydronephrosis and parenchymal thinning with extravasation of contrast, suggestive of renal pelvis injury with a large urinoma. An ultrasound guided percutaneous nephrostomy and a perinephric drain was inserted. DTPA scan showed GFR of 33.5 ml/min and relative function of 37% on right side. Right RGP narrowing at the right pelviureteric junction, with contrast extravasating from the renal pelvis. Right JJ stenting was done. Nephrostogram done after 72 hours, showed no contrast extravasation. Percutaneous drain was removed on follow up. He was planned for pyeloplasty after 3 months. **Discussion:** Contrast-enhanced CT is “gold standard” investigation in hemodynamically stable renal trauma. An associated UPJ obstruction would have findings like dilated pelvis, cortical thinning, collapsed ureter, contrast extravasation, and perinephric collection. The management of patients with blunt renal trauma has become increasingly conservative. Functional study is useful in deciding final management. An injured hydronephrotic kidney needs percutaneous nephrostomy or retrograde stenting for adequate drainage and also drainage of the urinoma followed by definitive management depending on the function. Our patient was managed on these standard guidelines.

UMP 01 – 19

Crossed renal ectopia without fusion associated with ureteropelvic junction obstruction

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Introduction: Crossed renal ectopia without fusion is an uncommon congenital developmental anomaly of the upper urinary tract. We share our experience with one such case of non-fused crossed renal ectopia associated with ureteropelvic junction obstruction (UPJO) & secondary renal calculi treated at our institute. **Methods:** A 60 year elderly male presented with left

loin pain at our institute. On evaluation, he was found to have left crossed renal ectopia without fusion associated with UPJO and secondary renal calculi. He underwent Open exploration & Anderson-Hynes' dismembered pyeloplasty with retrieval of renal calculi. A ureteral double-J stent was placed across the anastomosis. **Results:** Patients postoperative course was uneventful. After removing drain & catheter sequentially, he was discharged with advice to follow-up after a month for stent removal. **Conclusion:** Crossed renal ectopia without fusion associated with UPJO & secondary calculi presenting in elderly male is an extremely rare condition, with very few cases reported in literature. Anderson-Hynes' dismembered pyeloplasty with stone retrieval is the standard treatment with excellent results.

UMP 01 – 20

Rare presentation of ectopic ureter

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Introduction: ureteral duplication is common renal abnormality, occurring in approximately 1/. of population & 10/. of children with UTI. Incomplete duplication in which one enters bladder, rarely clinically significant. **Case Report:** 54 year old male presented with left flank pain. his CT scan showed left duplex collecting system arising from lower pole of left kidney with distal end of ectopic ureter adjacent to spermatic cord and multiple ureteric calculi in ectopic ureter. Patient underwent heminephroureterectomy. **Discussion:** duplex collecting system one of most common congenital renal abnormalities, characterised by incomplete fusion of upper & lower pole moieties resulting in variety of complete or incomplete duplication of collecting system. Embryologically duplication occurs when two separate ureteric buds arise from a single wolffian duct. Duplication can be variable. **Conclusion:** Incomplete duplication of collecting system can surgically treated by hemi-nephroureterectomy/partial nephroureterectomy if patient is symptomatic.

UMP 01 – 21

Problems and dilemmas in management of congenital renal and ureteric anomalies

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32 year old female presented with c/o Left loin pain 3 months duration, she never gave any history of urinary complaints. Normal menstrual history with 2 full term normal deliveries. Clinically no mass felt, pelvic examination normal findings. Blood biochemistry, renal function tests normal limits. USG KUB - Left Renal Cyst upper pole communicating with collecting system, IVU CT KUB - left upper moiety hydronephrosis with thin parenchyma, duplex system with left ectopic ureter. Underwent Left Heminephrectomy with excision of dilated refluxing ureter. Left dual arterial supply, upper moiety artery isolated but was not ligated. Post op she developed urine leak for flank wound. It was persisting on and off with occasional cessation. Meanwhile additional imaging done with CT angio showed upper moiety renal artery supplying remnant parenchyma which was still secreting urine, interval double J stenting was of no relief for the urine leak. A Fistulogram was done revealed a long well epithelialised tract communicating with left upper calyx with an abscess cavity. Hence planned definitive management, Left renal exploration, fistulous track excision deroofing of abscess, selective ligation of upper moiety renal artery, calycoreph, renoraphy with Gelfoam bolsters and omental interposition and left DJ stenting. patient recovered remarkably well and urine leak stopped completely. Fistulous track sent for HPE to rule out tuberculosis. **Conclusions:** Detailed history taking (more so when patient originates from other state) thorough diagnostic evaluation stepwise approach and meticulous planning before intervention and consultation with radiologist mandatory. The moiety renal artery should always be ligated to prevent urinoma and urine leak. Renoraphy with bolsters and confirmation by retrograde dye instillation with internal stenting must.

UMP 01 – 22

Bilateral vanishing testis with utricular cyst: A case report

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Introduction: Vanishing testis is absence of testis with blind ending spermatic vessels. Vanishing testis syndrome is seen in less than 5% of cryptorchidism cases. We present to you one such case of bilateral vanishing testis with utricular cyst and penoscrotal hypospadias. **Case Report:** A 22-year-old male presented with absence of testis on left side and passage of urine from ventral side of penis from birth. Examination revealed signs of undervirilization with bilateral non palpable testis with right complete inguinal hernia with penoscrotal hypospadias (stretched penile length – 4 cm). Per rectal examination revealed tense non tender cystic lesion anteriorly above prostrate. Hormonal profile showed increased Follicular Stimulating Hormone (FSH) and Luteinizing Hormone (LH) with lower testosterone levels. Karyotyping revealed 46 XY. Magnetic resonance imaging of pelvis showed utricular cyst of 5.6 x 5 x 4 cm posterior to bladder with normal seminal vesicles and a small prostrate. Transrectal Ultrasound guided aspiration from cyst was negative for malignancy. Diagnostic laparoscopy showed bilateral blind ending spermatic vessels and vas deferens. Total excision of the utricular cyst followed by correction of hypospadias in two staged manner was done and patient was placed on testosterone. **Discussion:** Vanishing testis syndrome is diagnosed when no testis is palpated during an examination under anaesthesia with blind-ending spermatic vessels. The phenotype depends on the extent and timing of the intrauterine accident in relation to sexual development. **Conclusion:** Bilateral vanishing testis syndrome is associated with spectrum of genital anomalies ranging from male phenotype to ambiguous genitalia. We have successfully managed one such with good result till date.

UMP 01 – 23

Female hypospadias presenting as renal failure: An unusual presentation

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Introduction: Female hypospadias is rare anomaly denotes congenital false opening in anterior vaginal wall proximal to hymenal ring. Usually these cases present with difficulty in catheterisation. This case was a late presenter with symptoms and signs of obstructive uropathy with AUR. **Case Report:** A 15 year old female presented to us with complains of thinning of stream with straining and vaginal voiding since childhood and features of renal failure for last 1 month. She went into AUR 2 days back and after failed attempt of catheterisation due to inability to localise meatus and SPC was placed draining turbid urine of around 1.5-2 lit immediately. On local examination no meatus was found. Her renal function test was deranged with serum creatinine was 10.2 mg/dl which dropped to 4.4 mg/dl. She underwent USG, MCU and MR urography and found to have B/L HDUN with thinned out Lt kidney parenchyma, significant post void residue was found. Renal scan suggested Lt kidney with split GFR 30%. During antegrade CPE a guide wire was passed from a pit near bladder neck up to meatus which was found to be stenosed and present just above the vestibule and was dilated and 16 fr PUC placed. **Conclusion:** A high index of suspicion is required to diagnose female hypospadias. Treatment involves surgical reconstructions of the hypospadias; two common techniques in use include vaginal flap urethroplasty and urethrolisis with meatal transposition. Our patient has underwent urethral dilatation and is on regular follow up.

UMP 01 – 24

Ectopic ureterocele with a single system hypoplastic non-functioning kidney: Report of a rare case

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Introduction: Ureterocele, a balloon like dilatation of distal ureter, is commonly seen in duplex system kidneys. Only 20% of cases are simple ureteroceles seen in single system kidneys which usually have good renal function. Here we present a case of ureterocele in a single system kidney which was hypoplastic and non-functioning. **Case Report:** A 25 year old

male presented with lower abdominal pain and obstructive lower urinary tract symptoms of 1 month duration. An ultrasound of the abdomen revealed absent right kidney with a cystic swelling in pelvis on the right side with intravesical extension. Intravenous urogram showed non-visualised right kidney. Contrast enhanced CT revealed an absent right kidney with a cystic swelling of distal ureter with intravesical extension. Isotope renal scan showed no tracer uptake on right side. Intraoperatively a cystic dilatation of the right distal ureter was found with intravesical extension till bladder neck. Traced above the ureter was ending in the lumbar region into a hypoplastic structure with identifiable calyces but no evidence of renal parenchyma. The ureterocele was excised along with the ureter and the dysplastic kidney. Histopathology revealed few atrophic renal tubules suggestive of renal hypoplasia. **Conclusion:** Renal dysgenesis is common in ureteroceles associated with duplex kidneys. Ureterocele in a single system kidney is usually seen in children and is intravesical with a reasonable renal function. Hypodysplasia of kidney in a simple ureterocele is a rare manifestation. Excision of ureterocele with removal of the hypodysplastic kidney is a reasonable approach in patients who are symptomatic.

UMP 01 – 25

Persistent Mullerian duct syndrome: A rare clinical presentation

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Introduction: Persistent mullerian duct syndrome (PMDS) is a rare form of abnormal male sexual differentiation characterized by retention of mullerian derivatives in patients with 46, XY karyotype and normal virilization. Here is a case of PMDS presenting as, persistent discharging fistula at the root of penis, 10 years following hernia repair. **Case Report:** A 17 year old boy born with XY karyotype and bilateral undescended testis, glandular hypospadias underwent right herniotomy at one year age which revealed transverse testicular ectopia. The hernial sac also contained a rudimentary uterus with fallopian tubes. Bilateral orchiopexy was done while the mullerian structures were left unattended. The patient presented to our department with 7 years history of a 0.5 X 0.5 cm seropurulent discharging lesion at the root of penis. He had male phenotype with well-developed secondary sexual characters, a prepenile scrotum with normal rugosity, bilateral atrophic testis and small sized penis. Imaging studies revealed a tubular structure at the right posterolateral aspect of the urinary bladder. Cystoscopy showed a patulous utricle continuing as a wide tubular channel through which a catheter was inserted, dye injected and fluoroscopy demonstrated a communication between the mullerian structure and skin lesion. In an open surgical exploration the fistulous tract was traced and found to communicate with mullerian structures situated behind the bladder extraperitoneally. The fistulous tract and mullerian structures were excised. Histopathology confirmed them as cervix, uterus and fallopian tubes. **Conclusion:** PMDS presenting as discharging cutaneous fistula is very rare. No case has ever been reported in literature.

UMP 01 – 26

Management of large prostate gland in men with impaired renal function: comparison of safety, efficacy and outcomes of monopolar, bipolar transurethral resection and open prostatectomy

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Objective: The purpose of the study was to compare the safety, efficacy and outcome of monopolar transurethral resection of prostate (M-TURP), bipolar transurethral resection (BP-TURP) and open prostatectomy (OP) in a tertiary care centre, of a developing country exclusively involving large prostate gland in men with renal impairment. **Methods:** Data of patients with gland size >90 g and serum creatinine >1.5 mg/dl, who presented with features of bladder outlet obstruction and were managed surgically, at our institution from April 2009 to March 2014 was analysed retrospectively. Preoperative and postoperative period values along with details like operative time, irrigation used, resected tissue, hospitalization days, catheter removal time, blood transfusion etc, were noted down. IPSS, QoL scores, PVR, serum creatinine and Q-max were recorded preoperatively and postoperatively

at each follow up visit. Follow up was performed at 1, 3, 6 and 12 months. Results: M-TURP, BP-TURP and OP were the three types of surgeries performed. Preoperative characters were similar in all the group. Hemoglobin drop, transfusion rates, irrigation time, catheter time and hospital days were significantly more in OP group. Changes in sodium levels and incidence of transurethral syndrome was more in monopolar group. The follow up data indicates significant improvement in IPSS, QoL, PVR and Q-max in all the groups. Conclusion: The above category of patients can be managed safely and efficiently by all the three procedures although BP-TURP has an advantage over the other two in terms of shorter catheterization, hospitalization and fewer complications like TUR Syndrome.

UMP 01 – 27

Spontaneous versus precipitated AUR: Analysing the outcome

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Objective: Objective of the study is to analyse two types of AUR – Spontaneous and precipitated and to evaluate the treatment outcome which also include TWOC. **Materials and Methods:** Our study included 140 patients who presented with AUR from July 2014 to June 2015. Patients were subdivided into 2 groups. Spontaneous AUR and Precipitated AUR. Each group was analysed considering variables like age of Patient, prostate volume, volume of urine drained after catheterization, TWOC and success rate of TWOC. **Results:** Of 140 patients presenting with AUR, 84 (60%) had spontaneous and 56 (40%) had precipitated AUR. The success rate of TWOC was lower in older age (≥ 70 years) and in those with enlarged prostates (≥ 50 ml), and a large drained volume at catheterization ($\geq 1,000$ ml). Compared with P AUR, patients with S AUR were more likely to be treated by surgery, either immediately (18% vs. 5%) or after prolonged catheterization (45% vs. 28%). **Conclusions:** Among the analysed patients, more patients presented with spontaneous AUR (60%) than with precipitated AUR (40%). The success rate of TWOC was more than 75% regardless of the type of AUR. Although TWOC is successful in majority of patients with small gland, younger age and smaller drained volume at catheterization, early surgical intervention should be considered if the patient has an enlarged prostate (≥ 50 ml) or a large drained volume at catheterization ($\geq 1,000$ ml).

UMP 01 – 28

Uretero-iliac artery cutaneous fistula: A rare presentation

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Introduction: Uretero-Iliac Artery-Cutaneous Fistula is a rare presentation **Aims & Objectives:** To report the factors contributing to development of uretero ileo cutaneous fistula **Materials and Methods:** A 55 yr male underwent femoropopliteal bypass which had to be converted to ileo – popliteal bypass due to stenosis of original graft. Patient presented 3 months later with sudden onset gross hematuria and high grade fever with sepsis and CT angio suggestive of fistula between ureter and iliac artery which was treated with covered stent graft. Patient presented 2 weeks later with discharge of urine from previous scar. CT suggested uretero cutaneous fistula. On cystoscopy with retrograde contrast studies diagnosis was confirmed with findings of contrast extravasation. JJ stenting of Ureter was done. Pt was discharged and on follow up fistula was completely closed CT showing no evidence of contrast extravasation. **Results:** CT done in follow up period did not show any contrast leak. At study done in 3 months period, Lab parameters were also normal. **Conclusion:** Infected arterial stent may be a cause of arterio ureteric fistula and proper identification of cause is must for correction. **Bibliography:** Bietz G, House A, Erickson D, Edean ED. Diagnosis and treatment of arterial-ureteric fistula. J Vasc Surg 2014;59:1701-4. Hildebrand P, Schiedeck TH, Bürk C, Franke C, Jocham D, Bruch HP. Uretero-iliac artery fistula A rare cause of massive hematuria. Scand J Urol Nephrol 2004;38:434-5.

UMP 01 – 29

Intrarenal foreign body mimicking a UPJ stone

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Prevention of retained/forgotten foreign bodies including surgical sponges and gauzes is clearly better than the treatment of the complications, and strict safeguards can ensure prevention of such complications. We report on a very rare case of left over gauze piece within the renal pelvis of a child, which mimicked like an urinary stone. **Key-words:** Foreign body, gauze, renal stone

UMP 01 – 30

Successful resolution of post percutaneous nephrolithotomy pseudoaneurysm by intravenous administration of tranexamic acid

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Introduction and Objective: Bleeding is a known complication after percutaneous nephrolithotomy (PCNL) with an incidence of 3–14% and requiring angioembolization in 1%. Following significant early or delayed bleeding after percutaneous nephrolithotomy, patient should be stabilized with crystalloids and blood products followed by renal angiography and superselective embolization if necessary. Sometimes conservative management of documented pseudoaneurysm can be done according to our previous experience. **Methods:** 36 year male underwent right percutaneous nephrolithotomy for right staghorn calculus. He had upper, mid and lower calyx puncture with dilatation of 30, 24, 28 french respectively. Patient had complete stone clearance but gross hematuria on post operative day 7 with significant drop in hematocrit. He received two unit blood and underwent CT angiography of renal vessels which showed around 5 mm pseudoaneurysm in interpolar vessel. As patient was stable hemodynamically, under close monitoring of vitals, hematocrit and urine output, he was started on injection tranexamic acid 1 gram thrice daily from our previous experience of spontaneous resolution of pseudoaneurysm in one case. **Results:** Hematuria stopped next day and patient kept on close observation for another five days. There was no further episode of hematuria and repeat CT angiography showed no pseudoaneurysm. **Conclusion:** Tranexamic acid, an antifibrinolytic agent eight times more potent than aminocaproic acid may have a role in thrombus formation, organization and fibrosis leading to complete occlusion of the pseudoaneurysm. It can be tried as initial measure in places where angiography suites are not nearby.

UMP 01 – 31

Post PCNL acute paraparesis: Two case reports and review of literature

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Introduction: PCNL is a routine surgical procedure for complex renal stones. Incidence of post PCNL neurological complication are $<0.1\%$. We present two case reports of extremely rare post PCNL paraparesis, managed conservatively. **Case 1:** 50 year old hypertensive male underwent left PCNL for 3 cm left renal pelvis stone with hydronephrosis and done under GA in a prone position. During the procedure patient had one brief episode of hypotension. 6 hour postoperatively patient complained of inability to move his both lower limbs (power 0/5). He was neurologically evaluated and conservatively managed. He was discharged in a stable condition. **Case 2:** 48 year old hypertensive female underwent left PCNL for 18 mm left pelvic stone. Post PCNL she developed weakness in left lower limb (power-2/5) after 4–6 hour. She was neurologically evaluated, MRI spine was normal. She was managed conservatively and discharged in stable condition. **Discussion:** Etiological factors for this dreaded complication are (1) Air embolism due to use of room air to opacify the collecting system. (2) Perioperative hypotension leading to spinal cord ischemia. (3) Prone position with compression on the abdomen which can compromise the spinal cord perfusion. (4) Because of excessive head rotation and neck extension which can cause short-term mechanical occlusion of a vertebral artery. We do not claim that the aforementioned etiologies are the main causes of neurologic complications, because recognition of the original causes requires more comprehensive evaluation.

UMP 01 – 32**Comparison of quality of life and outcome of ureteric stents vs silodosin and deflazacort after ureteroscopy and lithotripsy: A randomized controlled trial****Sharma AP**

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Introduction: Ureteral stents are an essential tool in the urologist's armamentarium. However, they are a source of discomfort to the patients in the form of lower urinary tract symptoms that significantly affect the quality of life of the patient. This study was designed to evaluate whether routine usage of stents is mandatory or a combination of $\alpha 1$ antagonist silodosin and anti-inflammatory corticosteroid can be used as an alternative to stent placement in uncomplicated cases. **Methods:** 60 consecutive symptomatic ureteric stone patients were included. Patients underwent ureteroscopy and intracorporeal lithotripsy. Post procedure 30 patients underwent stenting that was removed 6 weeks later; the other 30 were given silodosin and deflazacort for 4 weeks without ureteral stent placement. Ureteral Stent Symptom Questionnaire was used to evaluate urinary symptoms and the quality of life. **Results:** Non stented patient had statistically significant less pain as compared to the stented group. One non stented patient had to be stented for persistent pain and hydronephrosis at 3 weeks. Statistically significant difference in terms of work performance, general and sexual health, hospital visits and genitourinary sepsis was found in the non stented group. **Conclusion:** Ureteral stenting after uncomplicated ureteroscopic stone fragmentation is no longer absolutely necessary in all cases. Indirect cost savings in the form of patient time lost from work because of stent symptoms and visits for stent removal would also be expected in the non stented group.

UMP 01 – 33**Life threatening complication during a routine urological procedure in a young female presenting as stress induced cardiomyopathy named as takotsubo cardiomyopathy****Sumit Bansal, Ajit Sawant, Vikash Kumar, Prakash Pawar, Ankur Arya, Ashwin Tamhankar**

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Introduction: Stress induced cardiomyopathy also known as Takotsubo cardiomyopathy, is characterized by transient, often severe, left ventricular dysfunction and electrocardiographic changes that might mimic acute myocardial infarction in the absence of significant obstructive coronary artery disease. We report a similar case in a 32 year young female induced because of operative stress of ureterorenoscopy. Patient had uneventful recovery within a week of triggering event. **Case Report:** 32 years female without any comorbidity with serum creatinine of 1.7 (stented prior) because of bilateral obstructing ureteric calculi was being operated for ureterorenoscopy. She developed sudden onset tachycardia, hypotension, desaturation within fifteen minutes of onset of procedure. Procedure was abandoned. She was shifted to ICU on inotropes and mechanical ventilation. ECG showed T wave inversion in lead I and aVL with ST depression in precordial leads. Cardiac enzyme assay showed elevated Troponin T 1.01 (N < 0.014), CK MB 19.80 (N < 5.1), NT pro BNP 1130. 2D Echocardiography revealed global LV hypokinesia, LV EF 30%. Patient recovered subsequently with adequate supportive care with angiogram showing normal coronaries and normal EF on day 8. **Discussion:** Presenting symptom is acute substernal chest pain, dyspnea, syncope, shock. Acute complications can be heart failure, arrhythmias, cardiogenic shock. Excessive catecholamine stimulation, metabolic abnormalities, and microcirculatory dysfunction are thought to be responsible for the manifestations of this disorder. In our case operative stress was the trigger factor.

UMP 01 – 34**A correctable cause of urinary incontinence in young female****Chaurasia A, Jyothish A, Nithya R, Chandrasenan N, Sivaramkrishnan P**

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Introduction: Urinary incontinence is a common and distressing problem among middle-aged and older women, and symptoms may seriously influence the physical, psychological and social well being of the affected individuals. However, it is rare below 20 years of age, especially in nulliparous women. **Case Report:** A 16 year old girl presented with continuous urinary incontinence of 2 years duration. Local examination revealed a 1 x 1 cm polypoidal lesion at the urethral meatus, with urine leaking through the sides of lesion. Cystoscopy showed the polypoidal lesion prolapsing through the urethra with a long pedicle arising from the trigone below the right ureteric orifice. The patient underwent Transurethral resection of the polyp. Histopathology report came out to be Polypoidal cystitis. The patient regained her normal voiding pattern post-operatively and was completely asymptomatic after 6 months of follow-up. **Discussion:** The polyp and its pedicle were obstructing the bladder outlet, and were not allowing the mucosal surfaces of urethra to appose completely causing continuous urinary leakage. A high index of suspicion, therefore, is warranted in urinary incontinence in young females as it may be due to an easily correctable cause as in this case.

UMP 01 – 35**Female epispadias: A case report****Kamal Jessima Subahani, Sivaraj, Vetricherander, Aysha Shaheen B, Pitchai Balashanmugam K, Govindarajan P**

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Introduction: Female epispadias is a rare congenital anomaly with an incidence of 1 in 4,80,000 births. We are reporting a case of isolated female epispadias in an adult and its management. **Case Report:** 27 yrs unmarried female was admitted with incontinence of urine since childhood which was present on coughing, straining and walking. Patient also had frequency and nocturia. No significant past history. Regular menstrual cycles. Examination showed a depressed mons pubis, patulous urethral meatus with deficient dorsal wall and bifid clitoris. Blood and urine investigations within normal range. Ultrasound showed normal upper tract and a normal sized uterus. IVU showed good excretion and drainage of contrast on both sides. MCU showed no reflux. Cystoscopy showed short urethra with competent bladder neck. Patient underwent single staged epispadias repair with reconstruction of the mons and clitoroplasty. Continence has improved on 3 month follow up with occasional nocturia. **Discussion:** Isolated epispadias presenting in an adult female is a very rare anomaly. Female epispadias can also be a part of Extrophy – epispadias complex. Associated bladder neck incompetence requires staged reconstruction. This case is presented for its rarity.

UMP 01 – 36**Keratinous cyst: Unusual site****Ramesh C, Chandru T, Natarajan K**

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Introduction: Retroperitoneal cysts are rare, usually asymptomatic, abdominal lesions. Epidermoid cysts developing in this space usually occur in middle-aged women and are incidentally discovered in the presacral region during ultrasound examination. Occasionally, cysts may arise from splenic tissue or adrenal glands and develop above the presacral area. **Presentation of Case:** We present the unusual location of a cyst in the retroperitoneal space in a 25-year-old woman admitted to hospital with lower abdominal discomfort due to detection of a lesion in ultrasound imaging. A CT scan confirmed large Retroperitoneal cyst. Per op, a large retroperitoneal thin-walled cyst with no evident arising point was discovered. Histologic analysis revealed Keratinous cyst-Epidermal type. **Discussion:** Our patient presented with a retroperitoneal cyst extending from the uterine and to the bladder. To our knowledge, this unusual location in adult has not been previously reported in the literature. In our case the lesion was adjacent to inferior vena cava and mesenteric vessel which required special attention during preparation and was technically demanding. **Conclusion:** Surgery is the gold standard for the diagnosis and treatment of retroperitoneal epidermoid cysts. Successful treatment of benign retroperitoneal epidermoid cysts depends on appropriate diagnosis, careful operative technique, and adequate management of the underlying pathology.

UMP 01 – 37**Repair of uro-genital fistula: Experience over 8 years from North-East India****Stephen L Sailo, Syed Wasim Hassan, Vakha, Mukut Debnath**

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Aims and Objectives: To find out the total number of uro-genital fistula treated in the department of Urology, NEIGRIHMS, and Shillong in the last 8 years, the type of fistula, treatment and results. **Methods:** All the cases of uro-genital fistulae seen in the dept between 2006 and 2013 were included in the study, the particulars of each patient, type of treatment and the results were noted. **Results:** Fifty-two cases of uro-genital fistula were treated, majority (71%) of the fistulae were obstetric origin, 25% cases, gynaecologic origin and 4% cases due to carcinoma cervix. The most common type of fistula was vesico-vaginal fistula (78%) followed by uretero-vaginal (7%), combined VVF and recto-vaginal fistula (6%), urethra-vaginal (4%) and vesico-uterine (4%). The average size of the vesico-vaginal fistula was 2 x 2 cm. The average duration of symptoms for obstetric and gynaecologic fistulae were 5 years and 2 years respectively. Thirty-three (33) underwent operation. 19 patients were repaired by abdominal approach and 10 patients were repaired by vaginal approach and combined abdominal and vaginal approach was used in one patient and three patients underwent cystolithotomy. 26 out of 30 (87%) operated patients were cured of the fistula and 2 had spontaneous closure during follow-up. In the post operative period, one patient had post operative bleeding, 2 had stress incontinence and one developed bladder stone. **Conclusions:** Majority of fistula (71%) were obstetric origin. There was high cure rate (87%) following repair and the patients came very late for treatment.

UNMODERATED POSTER SESSION - II

UMP 02 – 01**Vesicocervical fistula: A rare presentation of a rare condition****Suchak SA, Bajpai RR, Suchak SS, Suchak AA, Thakur M, Shah L**

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Introduction: Vesicocervical fistula is a disease that is rare. It is mostly due to a result of obstetrical cause. This study reports our experience of such a case. **Materials and Methods:** A 39 yrs old female k/c/o cirrhosis with portal hypertension, with hypersplenism, with thrombocytopenia, presented with intermittent urinary incontinence, for last 18 years. She had a history of obstructed labour followed by a cesarean section during the first delivery, subsequently she developed a leak which was managed conservatively. She presented to us with dysuria, intermittent urinary leakage with vesical calculi. CT urography showed the presence of two vesical calculi with a vesicovaginal fistula. On cystoscopy there was a fistulous opening above the right ureteric orifice (supratrigonal) the vaginal defect could not be palpated, a ureteric catheter was passed over a guidewire across the fistula which was seen exiting the cervix on speculum examination, MRI done showed the presence of a vesicocervical fistula with the ureteric catheter in the fistulous tract. the patient underwent hysterectomy with excision of the fistulous tract, the vagina and the bladder were separately closed and omentum was interposed. Patient is now free of all catheters and voiding normally with no leakage. **Conclusion:** Successful closure of vesicocervical fistula requires accurate diagnostic evaluation, appropriate repair using techniques that utilize basic surgical principles, and the careful application of interposing tissue flaps.

UMP 02 – 02**Transobturator tape: Late vaginal extrusion****Yuvaraj K, Muthulatha N, Saravanan K, Ilangoan M, Govindarajan, Leelakrishna P, Jayaganesh R**

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Case Report: A 60-year-old DIABETIC lady presented with complaints of obstructive lower urinary tract symptoms. Past history of transobturator taping in 2010 for stress urinary incontinence and hysterectomy for DUB IN 2014. On examination the general examination was normal, per vaginal examination showed a Mesh partly extruding through the

vaginal mucosa below the urethral meatus associated with narrowing of the meatus. Surgical removal of the extruded part of the mesh done along with cystoscopic examination. **Discussion:** Midurethral tapes are associated with a risk of erosion and extrusion of the synthetic material. The mean time for presentation of symptoms caused by vaginal erosion of the tape after TOT procedure is 9 months. Our patient's presentation is unusual as she presented 5 years after the procedure thus highlighting the need for a long-term follow up after mid urethral sling procedures. The present case highlights the importance of the long-term follow up after any sling procedure as erosion and/or extrusion may arise at any time following the procedure.

UMP 02 – 03**Giant primary hydatid cyst of kidney: A rare case****Arpan Choudhary, Ranjan K Dey, Ranjit K Das, Supriyo Basu**

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Introduction: Hydatid cyst is a parasitic disease caused by Echinococcus granulosus. It commonly affects liver and lung. Isolated renal involvement is rare and is seen in around 2-4% of the cases. Patient may remain asymptomatic for a long period of time, due to indolent nature of the disease process. Flank pain (80%) and mass per abdomen (40%) are the common non-specific presenting features. Hydatiduria is a specific symptom, but uncommonly seen (10-22%). **Case Report:** 32 year old female presented with left sided flank pain for 6 months. USG Abdomen showed multilocular cyst with moving echoes inside, arising from lower pole of left kidney. CECT KUB revealed large multiseptated hydatid cyst measuring 12 x 14 cm, occupying the lower pole and approaching hilum. Anti-echinococcal antibody test was positive. CT Angiogram was done to assess feasibility of nephron sparing surgery. Open partial nephrectomy was done without clamping of vessels and cyst was excised in toto. **Conclusion:** Hydatid cyst should be considered as differential diagnosis in complicated cystic lesion in kidney. Appropriate investigation followed by surgery, preferably nephron sparing and antihelminthic treatment result in satisfactory outcome.

UMP 02 – 04**Analysis of urinary lipids in patients with chyluria and their relation to outcome of medical management: A single centre study****Ashok Kumar Gupta, Goel A, Sankhwar SN, Singh V, Singh BP, Sinha RJ, Kumar M**

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Introduction and Objective: Parasitic chyluria caused by lymphatic filariasis is common in India especially in states U.P and Bihar. There is paucity of literature on chyluria because of rarity of disease in the west. Aim was to evaluate urinary lipids in patients with active chyluria and to ascertain any correlation of urinary lipid levels to outcome of medical management. **Methods:** All chyluria patients who were treated conservatively in Department of urology, KGMU from September to October 2014, included in study. Urinary lipid levels (Triglycerides and Cholesterol) recorded at commencement of treatment and at time of follow up. Depending upon treatment response patients categorized into responders and failures. **Results:** A total of 186 patients of chyluria presented to department for treatment. 140 (84 males, 46 females) of these were treated conservatively. Mean age was 37.55 years. Patients followed up for a mean period for 10.2 months. A total of 88 patients were free of disease at follow up of 6 months or more while the rest failed to respond. Mean urinary triglyceride, cholesterol levels in failure cases at presentation were significantly higher (p value < 0.05) than responders. **Conclusions:** Medical management of chyluria gives short-term success rate (67.6%). Higher urinary triglycerides and cholesterol at baseline are poor-risk factors for response to medical management of chyluria.

UMP 02 – 05**Epidemiology and nonsusceptibility of uropathogens in community versus hospital in North West England****Chiran JK, Gerrard A, Rao P, Sundar Rao PSS, Saghir N, Sharma R, Guleri A**

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Introduction and Objectives: Antimicrobial resistance (AMR) is a serious and rapidly growing global concern with far reaching collateral implications. Paucity of newer antibiotics and growing AMR has attracted media and politicians attention raising profile of antimicrobial stewardship. Blackpool Teaching Hospitals, a large tertiary hospital, caters to population of 440,000 in northwest England. This study was undertaken to inform publications of community/hospital antimicrobial guidelines for treatment of urinary tract infections. **Methods:** Analysis of data (6 yrs August 09-15) from Clinisys pathology system was undertaken including mid-stream-urine (MSU), inpatient/community specimens, gender/age, pathogens, antimicrobial susceptibility test (AST) profiles. **Results:** Key findings from analysis of data August 2009-15 includes: 63% (257,139/408157) of MSU specimens processed were from community while 37% from hospital patients. 18.8% total increase in samples observed. F:M 3.5:1 (55951:15687) ratio. 47396, 21159 and 3133 from age groups 60 and over, 17-59 y and under 17 y were processed. 17.6% (71687/408157); 12.56% (18970/151018) and 20.5% (52717/257139) of total specimens and those from hospital and community respectively remained positive on culture. 90.7% (64996/71687) included key pathogens – E. coli 84.1% (54670/64996); Klebsiella spp 7.7% (5062/64996); others 8.2% (Proteus spp, E. faecalis and Pseudomonas spp). Overall 47%, 32%, 10%, 10%, 9% and 8% resistance to amoxicillin (AM), trimethoprim (TM), cephalexin (CE), pivmecillinam (PM), nitrofurantoin (NF) and ciprofloxacin (CP) was noted. Details and trends in increasing resistance to be presented. **Conclusions:** Annual epidemiological analysis of AST informs the necessary modification to the hospital and community antimicrobial guidance publications. Antibiotic stewardship (AS) has emerged as the single most effective driver for containing the rapid emergence of AMR. Local practices and principles of AS to be discussed.

UMP 02 – 06

Retroperitoneal hydatid cyst presented as bladder outlet obstruction: An unique presentation

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Introduction: Retroperitoneum is not a common site for hydatid cyst. Retroperitoneal hydatid cyst presenting as bladder outlet obstruction is very rare. **Patients and Methods:** A 56 year old male presented with h/o LUTS for 3 months followed by AUR for which SPC was placed after failed attempt of per urethral catheterisation elsewhere. Urethroscopy was S/O multiple false tract at prostatic urethra with compressed bladder neck. PUC was placed over guide wire inserted during urethroscopy. On examination lump was palpable in Suprapubic and left lumbar region. DRE was suggestive of compressed rectum. On further evaluation USG revealed left moderate HDUN with large pelvic and retroperitoneal cystic lesion which was confirmed by CECT abdomen with suspicion of hydatid cyst. IgE antibody for echinococcus was found to be negative. He underwent exploratory laparotomy through midline incision and cysto pericystectomy was done for Left lumbar cyst and cyst evacuation with omental filling for large retrovesical hydatid cyst. Post operatively patient is doing well. **Conclusion:** In tropical countries hydatid cyst can present with many weird presentations, bladder outlet obstruction is one of them.

UMP 02 – 07

Emphysematous pyelonephritis masquerading as hollow viscus perforation: A rare case report

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Introduction: Emphysematous pyelonephritis (EPN) is severe necrotizing life threatening infection of renal parenchyma. EPN is uncommon, seen mainly in patients with uncontrolled diabetes mellitus or who are immunocompromised. EPN presenting as pneumoperitoneum is very rare. We present such a rare case of EPN presenting as hollow viscus perforation. **Case Report:** A 55 years diabetic female presented in surgical emergency with diffuse abdominal pain, fever with chills, vomiting for 5 days. Not

passed flatus and stool for 2 days. On examination diffuse tenderness was present all over abdomen, guarding and rigidity was present. X-abdomen showing gas under diaphragm suggestive of hollow viscus perforation. USG suggestive of hepatomegaly with features of right emphysematous pyelonephritis. Contrast enhanced CT s/o pneumoperitoneum with right EPN. Diagnosis of perforation peritonitis with right EPN was made. Patient underwent exploratory laparotomy. There was bulge in right retroperitoneum, no perforation was found. Patient responded to antibiotics. Discharged on 10th post-operative day. **Discussion and Conclusion:** Atypical presentation of EPN may masquerade as hollow viscus perforation by producing radiographic image of free intraperitoneal air. Also clinically it was highly s/o of perforation of hollow viscus presenting as perforation peritonitis. So high degree of clinical suspicion is necessary to diagnose this particular subset of EPN presenting as perforation peritonitis. In such carefully selected cases the patient can be managed conservatively if his general condition is stable and can avoid negative laparotomy.

UMP 02 – 08

Fournier's gangrene after transurethral resection of prostate: A rare entity

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Introduction: Fournier's gangrene is a rapidly progressing life threatening polymicrobial infection affecting male genitalia & perineum. Risk factors are age, diabetes, alcoholism, malnutrition, low socio-economic status. Transurethral Resection of prostate (TURP) is a commonly performed surgery for enlarged prostate. But Fournier's gangrene is a very rare complication after TURP. In fact there is no case report of post TURP Fournier's gangrene affecting penis till date. **Methods:** We had a 54 years diabetic male patient who presented to us with discoloration of penile skin with pain, swelling and slight foul smelling discharge. He underwent TURP outside 7 days back. He was immediately put on broad spectrum antibiotic coverage with strict control of blood sugar with regular insulin. Serial surgical debridements were done which controlled the spread of infection but resulted loss of whole penile skin. After 3 weeks, when wound became healthy and culture came to be negative, we did a split thickness skin grafting. **Results:** Seven days after skin grafting, wound was opened and it showed 100% uptake. Donor site was opened after 2 weeks which showed complete healing. Foley's catheter was removed after 7 days. Patient was discharged 2 weeks after skin grafting. **Conclusions:** Fournier's gangrene is very uncommon but serious life threatening condition after urological interventions. So, as urologists, we should be very vigilant while doing these procedures especially in patients with risk factors, like in our case (diabetic). A high index of clinical suspicion is necessary for early diagnosis. Once diagnosed, principles of management include early stabilization, broad spectrum antibiotic coverage and early aggressive surgical debridement.

UMP 02 – 09

TRUS guided percutaneous perineal prostatic abscess drainage: Description of a technique

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Introduction: Prostatic abscesses present routinely in urologic practice, and certain diseases such as diabetes predisposes to these infections. Though trans urethral drainage of the abscess is possible, it does have its limitations especially in younger patients. We describe our technique of TRUS guided percutaneous perineal drainage. **Materials and Methods:** The procedure is done under TRUS guide with additional Carm control. Procedure is done in lithotomy position in general anaesthesia. Routine PCN instruments including disposables are used. After scanning the prostate in the longitudinal axis, the initial puncture needle is used to puncture the abscess. Pus is taken for culture and radiocontrast material is instilled into the abscess for localization on the Carm. The tract is dilated upto 12 F and a 10 F Malecot's catheter is inserted and fixed to the perineum. The Malecot's catheter is aspirated twice daily, till the aspirate becomes minimal. The patient is administered IV antibiotics as per the culture report. If the patient develops retention then a Foley's catheter is placed. **Results:**

Drainage rate and clinical response has been good. Complication rate including rectal injury have been minimal or absent. Conclusion: TRUS guided percutaneous perineal prostatic abscess drainage is the treatment of choice for this pathology, and complication rate is minimal.

UMP 02 – 10

Primary tuberculosis of penis: A rare case report

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Introduction: Tuberculosis of the penis is an extremely rare disease. Presents as superficial ulcers of penile skin or as tuberculous cavernositis. It may be a secondary manifestation of tuberculosis. Can occur following ritualistic circumcision. **Case Report:** A 70 yr male presented with painless ulcer over the glans penis for last 3 mths which progressively increased in size with loss of weight & appetite. **Conclusion:** Chronic penile ulcer may be mistaken for cancer. To avoid unnecessary mutilating surgery routine pre-operative histopathological study is to be done. Though primary tuberculosis of penis is an extremely rare entity, it cannot be ignored.

UMP 02-11

Renal Echinococcosis: Rare presentation of pcs involvement with daughter cyst

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Introduction: Recurrent hydatid disease is a known complication following surgical treatment. Genitourinary hydatid disease is a rare entity with kidney being the most common site with predominant involvement of cortex. Pelvic/lyceal involvement is rare predominantly presents as hydatiduria with rare presentation of ureteral obstruction. We hereby report a unique case of recurrent hydatid disease with involvement of pelvic/lyceal system by daughter cyst. **Methods:** A 52 year old farmer, operated twice for liver hydatid, presented with right flank heaviness for 2 months. Physical examination revealed midline scar of previous surgery with palpable vague lump of 5x6 cm in right lumbar region. USG abdomen showed cystic SOL 17.5 x 11 cm at upper pole in right kidney with multiple septa, abutting liver with gross HDN & proximal hydronephrosis s/o Renal Hydatid. MRI urogram revealed enlarged right kidney with well defined cystic mass, 16 x 11 x 18 cm at upper pole of right kidney with presence of daughter cysts, laminated membranes and internal heterogeneous echogenicity in cystic mass with presence of daughter cysts, laminated membranes seen in dilated pelvic/lyceal system of right kidney and with dilated ureter. He had a positive hydatid serology with eosinophilia and raised serum creatinine. EC scan showed right non functioning kidney. **Results:** Patient successfully underwent right nephrectomy with uneventful recovery. **Conclusion:** Genitourinary hydatid disease is a rare presentation but should be suspected in patients with positive past history. Pelvic/lyceal involvement with daughter cyst formation is even rarer presentation in hydatid disease.

UMP 02 – 12

Isolated renal hydatidosis presenting as renal mass: A diagnostic dilemma

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Hydatid disease is a parasitic infestation by larval form of Echinococcus granulosus. Isolated renal involvement is extremely rare. There are no specific signs and symptoms of renal hydatidosis. However it may present as palpable mass, flank pain, hematuria, malaise, fever and hydatiduria or as a complication of it such as infection, abscess, hemorrhage, necrosis and pelviureteric junction obstruction, renal failure etc. Except hydatiduria, none are pathognomonic for renal hydatidosis. There is no literature on renal hydatidosis presenting as renal mass, we report three cases of isolated renal hydatidosis which mimicked renal mass on imaging study.

UMP 02 – 13

Penile gangrene: A rare entity

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Introduction: Fournier's gangrene is a life threatening form of infective necrotising fascitis of the perineal, genital, or perianal regions, which commonly affects men. The source of infection in the vast majority of cases, is either perineal and genital skin infections. The predisposing factors are diabetes mellitus, chronic alcoholism and immunocompromised infection like HIV. **Case Report:** A 48 year old male smoker presented with pain and blackish discoloration of the distal part of penis since last 4 days which developed following rupture of a papulovesicular lesion over the prepuce of penis. The patient was hospitalized and broad spectrum antibiotics were administered parenterally and emergency wound debridement & urinary diversion by suprapubic cystostomy was done. After repeated wound debridement and dressings wound healed. Our case was unusual in that the penis was solely involved which is very rare. **Conclusion:** Penile gangrene is a surgical emergency and should be treated promptly by debridement and supportive treatment.

UMP 02 – 14

Xanthogranulomatous pyelonephritis presented as discharging fistula with squamous cell carcinoma of the fistula tract: An uncommon presentation

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Introduction: Xanthogranulomatous pyelonephritis (XPN) of the kidney is an uncommon type of chronic granulomatous inflammation due combination of stone, obstruction and infection. It remains asymptomatic for a long time. Discharging fistula is a rare way of its presentation, as in our case. Chronic fistula is a known predisposing factor for transformation into Squamous cell carcinoma (SCC). **Case Report:** A 50 years old men presented with chief complaints of left sided constant dull aching loin pain for last 1 year, followed by localized reddish swelling and discharging sinus after 4 months. CECT KUB revealed non excreted left kidney with multiple low attenuated areas, along with a large staghorn calculus at left renal pelvis and multiple small calculi at lower calyx. CECT features were suggestive of Xanthogranulomatous pyelonephritis. Biopsy from sinus margin showed well differentiated Squamous cell carcinoma. Left sided nephrectomy with enblock excision of adhered descending colon wall was done along with excision of sinus tract. Excised colon wall was repaired with diversion transverse colostomy done. Histopathology showed SCC of fistula tract with clear margin and chronic granulomatous pyelonephritis with abundant foamy cells, suggestive of XPN. Patient recovered well after surgery and colostomy was closed after 3 months. **Conclusion:** XPN of kidney is a rare type of pyelonephritis, which remain asymptomatic for long time and may present with long standing morbidities such as chronic pain and fistula, along with loss of renal unit. Nephrectomy is required in most cases and may be difficult due to adhesions to surrounding structures.

UMP 02 – 15

Fournier's gangrene of penis involving corpus spongiosum: A rare entity

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Fournier's gangrene of penis is a rare but fulminant condition often associated with significant morbidity and mortality. Fournier's gangrene typically spares testis, urethra and deep penile components because of their deeper blood supply which is independent of compromised fascial and subcutaneous circulation. Here we report an unusual case of 45 year old non diabetic male, who presented to emergency department with acute urinary retention due to impacted urethral calculus, which progressed to development of Fournier's gangrene of penis with isolated involvement of corpus spongiosum & penile urethra. Early therapy is the key, including hospitalization, parenteral broad-spectrum antibiotics, debridement of

entire shaft of the penis distal to the devastated area without excising the normal skin, urinary diversion & skin grafting. Our case is unique in that there was selective involvement of corpus spongiosum leading to loss of penile urethra which is a rare entity.

UMP 02 – 16

Emphysematous pyelonephritis: Prognostic factors and management outcome

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Introduction and Objective: Emphysematous pyelonephritis (EPN) is severe, necrotizing renal parenchymal infection caused by gas producing pathogens. It is life-threatening emergency, with high mortality. Aim was to analyse the prognostic factors, management and outcome of patients with EPN. **Materials and Methods:** Retrospective analysis of the clinical data, investigations, treatment, and outcomes of 6 patients with EPN. **Results:** Out of 6 patients 5 (83.33%) were diabetics. male to female ratio is 1:2. NCCT KUB done and radiological grading of EPN had 2 patients in class II, 3 in class III and 1 in class IV. *Escherichia coli* in 4 (66.66%) patient was the most common organism in urine. Class III and IV were 66.66% (4/6) of these cases. Among them 2 (33.33%) presented in altered sensorium, 4 (66.66%) had hyponatremia, 4 (66.66%) had thrombocytopenia. All patients received intravenous antibiotics. One patient had DJ stenting, 2 underwent percutaneous drainage. Survival rate was 83.33% (5/6). All these patients presented in sepsis. Overall poor outcome was associated with female gender, altered sensorium, age >55 years, uncontrolled diabetes, and hyponatremia is more likely to have poor prognostic EPN. **Conclusion:** For localized EPN (classes 1 and 2) and extensive EPN (classes 3 and 4) with a more benign manifestation (<2 risks), PCD combined with antibiotic treatment can provide a good outcome. However, nephrectomy can provide the best management outcome and should be promptly attempted for extensive EPN with a fulminant course (ie, ≥2 risks).

UMP 02 – 17

Atypical mycobacterial port site infection following PCNL

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Aim is to make aware the urologists about the menace of Atypical mycobacterial infection after PCNL in third world countries. We present an out break of such infection in 7 Cases which were managed by drugs and or wound excision. Two cases healed while others are still on drugs.

UMP 02 – 18

Laparoscopic assisted percutaneous nephrolithotomy in ectopic pelvic kidney

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Introduction: Percutaneous nephrolithotripsy (PCNL) is a well established technique in the surgical management of nephrolithiasis. The conventional fluoroscopic guidance of PCNL will be of limited value in ectopic anomalous kidneys due to the abnormal anatomical landmarks with consequent compromise of the procedure's safety. In this group of patients, laparoscopic assistance will provide direct visual guidance through the abnormal tissues during the percutaneous technique. **Materials and Methods:** We report here a case series of 6 patients who presented to us with a complaint of abdominal pain. The workup showed a pelvic ectopic kidney with good functioning kidney. Technical factors which made this procedure safe include fluoroscopic guided puncture with direct visual guidance by laparoscope, use of an Amplatz sheath and standard nephroscope for PCNL. **Results:** Mean age is 49.0 ± 4.3 year and mean stone size is 26 ± 3 mm. Mean procedure time was 98 ± 7 minutes. Complete stone clearance was achieved in all 6 cases. 5 (83%) patients needed only one tract, and 1 (17%) needed two tracts. No notable complications were encountered. No transfusion was done. The average hospital stay was 2.2 days. **Conclusion:** With proper precautions and meticulous technique, Lap guided PCNL is a safe and effective modality to treat calculi in pelvic ectopic kidney.

UMP 02 – 19

A study on outcome of laparoscopic donor nephrectomy: Our institutional experience

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Aims and Objectives: (1) To study the outcome of Laparoscopic Donor Nephrectomy in our institution. (2) To compare Laparoscopic and Open Donor Nephrectomies in our institution in terms of donor and graft (recipients) outcomes. **Study Design:** Prospective and Observational study. **Study Population:** 60 Patients. **Inclusion Criteria:** (1) Donors 25 to 50 years (2) Left donor nephrectomy (3) Single vessel (4) ABO compatible donors (5) Donors with no associated cardiovascular and pulmonary diseases (6) Absence of renal disease/infection/malignancy. **Exclusion Criteria:** (1) Donors with hypertension and Diabetics (2) Donors age <25 and >50 years of age (3) Donors with associated renal disease/infection/stones (3) Donors with mental dysfunction (4) Donors with transmissible malignancy (4) Solitary kidney (5) Donors with transmissible disease. **Materials and Methods:** It is a prospective study conducted in our institution from august 2012 to march 2015. Outcome of the 60 Donor Nephrectomy done in our institution is studied. Ethical committee approval obtained from our institution. **Statistical Analysis:** Descriptive statistics was done for all data and suitable statistical tests of comparison were done. Continuous variables were analysed with the unpaired t-test and categorical variables were analysed with the Chi-Square Test with Yates correction. Statistical significance was taken as $P < 0.05$. The data was analysed using EpiInfo software (7.1.0.6 version; Center for disease control, USA) and Microsoft Excel 2010. **Conclusion:** Laparoscopic donor nephrectomy is an effective, safe and rewarding procedure. Although it is time consuming and technically challenging with steep learning curve once acquired has produced results as comparable and also better in some aspects than open surgeries. The analgesic requirement, duration of hospital stay and the blood loss were less with the laparoscopic surgery than with open surgery. Results of Graft functioning of laparoscopically harvested kidneys were equivalent to those kidneys harvested from open surgery. All these show that laparoscopic donor nephrectomy can be made as the procedure of choice in future.

UMP 02 – 20

Correlation of epididymo-orchitis with semen analysis

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Introduction: Epididymo-orchitis is a clinical syndrome consisting of pain, swelling and inflammation involving unilateral or bilateral epididymis and/or testis. **Aim:** To study the correlation of epididymo-orchitis with semen analysis. **Material and Methods:** This is a prospective study of 34 patients who presented with epididymo-orchitis at Goa Medical College from July 2014 to June 2015. The organism was isolated from urine or prostatic secretion. Effect of epididymo-orchitis on semen analysis was studied at the end of one and three months. Semen analysis factors included were sperm count, motility and abnormal forms. Exclusion criteria were culture showing mixed growth, age above 50, bilateral and recurrent disease. **Results:** 34 patients between 20 to 50 years of age presented with epididymo-orchitis were included. Commonest presentation was pain (88%), scrotal swelling (94%), discharging sinus (11%) and chronic epididymo-orchitis (8%). Following table shows types of organism and its effect on semen analysis. Commonest organism isolated were *E. Coli*, *Klebsiella*, *Mycobacterium tuberculosis* and *Chlamydia trachomatis*. Semen analysis were done at one month revealed significant azoospermia/oligospermia with poor motility in all cases. Repeat semen analysis at three month showed increase in the sperm count and motility in all except in cases with *mycobacterium tuberculosis*. **Conclusion:** All 3 parameters of semen analysis were significantly affected following attack of epididymo-orchitis which improved after three months. However in tuberculous epididymo-orchitis the semen parameters did not show improvement even after three months.

UMP 02 – 21**Influence of age in sperm DNA fragmentation of Indian infertile men: Study using SCSA® test**

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Introduction: Currently, the male factor is responsible for greater than 40% of Couple Infertility. Sperm DNA integrity and Chromatin packaging play an essential role in a successful pregnancy. In this study, we compare the quality of the sperm chromatin using the Sperm Chromatin Structure Assay (SCSA® Test) with patient age. The SCSA® Test simultaneously measures both the DNA quality (DNA Fragmentation Index or %DFI) as well as the presence of immature sperm proteins (High DNA Stainability or %HDS). **Materials and Methods:** Infertile men were first evaluated with clinical history, examination and a basic semen analysis. Criteria to undergo a Sperm DNA Fragmentation analysis were one or more of the following indications: Abnormal semen parameters except azoospermia, failed fertility treatments, recurrent miscarriages, lifestyle factors, advanced male age, borderline varicocele and idiopathic infertility. Men with severe oligozoospermia (<2 million/ml) with high seminal debris were excluded. The SCSA® Test results were co-related with age **Results:** Totally 958 patient samples were analysed, 7 patients had severe oligozoospermia (<2 M/ml) with high seminal debris and were excluded from study. Of the 377 men <35 years age 151 (40.1%), 122 (32.4%) and 104 (27.6%) had %DFI <15%, 15-25% and >25% respectively. Of the 358 men 35-40 years age 108 (30.2%), 111 (31%) and 139 (38.8%) had %DFI <15%, 15-25% and >25% respectively. Of the 142 men 40-45 years age 22 (15.5%), 45 (31.7%) and 75 (52.8%) had %DFI <15%, 15-25% and >25% respectively. And of the 74 men >45 years age 6 (8.1%), 15 (20.3%) and 53 (71.6%) had %DFI <15%, 15-25% and >25% respectively. **Conclusion:** This is the first study to be done in the Indian population using the SCSA® test method. Our findings prove that with advancing male age, the quality of the Sperm DNA is significantly affected resulting in an increase in infertility.

UMP 02 – 22**Comparison of clinical characteristics and surgical outcomes between adolescents and adults with varicocele**

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Objective: Comparison of clinical characteristics and surgical outcome between adolescents and adults presenting with varicocele. **Materials and Methods:** We retrospectively analyzed the characteristics of 123 patients, 43 adolescents (Group I) and 80 adults (Group II) who were admitted and underwent surgical repair of varicocele between January 2011 and December 2013, in the Department of Urology, Government medical college, Calicut. The most bothersome symptoms, bilaterality, grades, semen parameters, post surgery patient satisfaction, and recurrence-free period were compared between the two groups. **Results:** The most bothersome symptoms were scrotal heaviness, pain, and hypotrophy in adolescents and pain, scrotal heaviness, infertility, and hypotrophy in adults. There were no significant differences between-group differences in bilaterality, grades, pre or postoperative semen parameters, patient satisfaction rates, or recurrence-free periods. In both adolescents and adults, semen density increased significantly after surgery. **Conclusions:** There were no significant differences in clinical characteristics or surgical results between adolescents and adults with varicocele, except for the most bothersome symptoms. Semen density increased significantly after surgery in both the groups.

UMP 02 – 23**Renal perinephric collection due to pancreatic pseudocyst: A rare presentation: Case report**

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We present the case of 63 yr chronic alcoholic male patient presented to us with c/o left sided flank, dull aching pain of 1 week duration with chronic

c/o epigastric pain for about 5 years and on evaluation with USG and CT-SCAN found to have a left sided perinephric collection of size of 13.0 x 6.3 x 6.7 cm communicating with small collection at pancreatic tail. Collection was drained percutaneousley for diagnostic purpose considering it to be pancreatic origin in view of no past history of trauma and renal disease and aspirated fluid was found to have high amylase value on evaluation. So the diagnosis of left sided perinephric collection due to pseudopancreatic cyst was confirmed in a case of pancreatitis. That was managed surgically later. It's a rare entity with about 8 such cases were found in literature. We present this case due to its rarity and its importance in considering such uncommon differential in mind before embarking on surgical exploration that may lead to unfavorable outcome.

UMP 02 – 24**Ileo-vesical fistula following transurethral resection of bladder tumour: An unusual presentation and lessons learnt**

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Introduction: Ileo-vesical fistula a rare entity, may form due to diverticular disease, prostatic or colonic malignancy, granulomatous bowel disease, radiation enteritis, trauma, bladder cancer, gynaecologic tumours, tuberculosis, or iatrogenic causes. Commonest cause is Crohn's disease. Bowel injury after TURBT is uncommon and is usually found in sigmoid colon or rectum which is managed by diversion colostomy. To the best of our knowledge and search of literature this is the first documentation of ileo-vesical fistula after TURBT. **Patients and Methods:** A 65 year old male presented with complaints of fecaluria and low grade continuous fever for last 10 days following TURBT for bladder tumor on trigone and posterior wall. Suspecting colo-vesical fistula he underwent diversion proximal sigmoid colostomy but the fecaluria persisted. CECT abdomen with both oral and rectal contrast was suggestive of ileo-vesical fistula between posterior wall of bladder and a pelvic ileal loop which is very unusual after TURBT. He later underwent laparotomy (excision of fistulous tract and involved portion of ileum, resection and anastomosis of ileum) following which fecaluria resolved completely. **Conclusion:** There is a learning lesson in the management of such cases as diversion sigmoid colostomy was a hasty step in this case without keeping in mind a possibility of proximal colonic/ileal injury.

UMP 02 – 25**Muscle invasive bladder tumour with a large vesicle calculus: A rare case report**

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Nonurothelial bladder cancers are less common, comprising approximately 5% of all bladder cancers and most of the SCC are of bilharzial origin in endemic areas. A large bladder calculus with non bilharzial SCC is rarely reported in literature. The association between chronic bladder inflammation/irritation and squamous cell carcinoma has been studied by many researchers and bladder calculus was proposed as a risk factor for development of non bilharzial SCC. SCC are aggressive tumor and known to have propensity for local recurrence despite complete resection, but nodal and distant metastasis is rare. Currently there is no accepted guideline for management of SCC and most of the experience is derived from case reports and series. We are sharing our experience of unusual presentation of SCC with large muscle invasive bladder calculus.

UMP 02 – 26**A rare case of ureteric intussusception due to benign tumour**

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Introduction and Objective: Ureter Intussusception is a rarely reported event and is usually secondary to a ureteral lesion. Fibrous ureteral

polyps are rare benign tumors of the ureter. They may cause ureteral intussusception, demonstrable preoperatively on intravenous urography. Methods: A 47 Yrs old lady was admitted with history of bleeding perurethrally. She was evaluated for the same and was diagnosed to have left ureteric soft tissue tumour. Ureterorenoscopic biopsy revealed it to be Fibroepithelial polyp (FEP). She was planned for definitive procedure during which it was diagnosed to have a large left ureteral fibroepithelial polyp causing intussusceptions of left ureter following which laparoscopic segmental excision of ureter along with the tumour. Conclusion: Most often Ureteral Intussusception is associated with benign tumors. FEP's are rare, benign, mesodermal tumors of the urinary tract that are histologically composed of fibrous stroma covered with a transitional epithelium. In some cases it is difficult to differentiate them from transitional cell carcinoma, based only on imaging findings and their potential for malignant transformation is extremely rare.

UMP 02 – 27

A prospective observational study: Assessment and categorisation of urological operative complications as per Clavien-Dindo classification in our institute

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Introduction and Objectives: At present main methods of assessing quality of surgical results & audits are mortality and morbidity. In 1992 Pierre Alain Clavien proposed a therapy oriented classification of post-operative complication. In 2004 Daniel Dindo et al modified the system to include life threatening complications resolved by critical care intervention. This grading system is well accepted worldwide as it is simple, reliable and valid. Our objectives are - To assess and categorize urological operative complications as per Clavien-Dindo classification and to assess complication rates in reference to age, body mass index, American society of Anesthesiology score and comorbidities (Diabetes, Hypertension) and laparoscopic versus endourological versus open procedures. **Materials and Methods:** We prospectively observed total 310 urological operations conducted in our institute in 1 year, aged 13-80 yrs, 190 male (61.3%) 120 female (38.7%), open procedure (n 122), laparoscopic procedure (n 35), endourological procedure (n 153). We have assessed and categorized operative complications as per Clavien Dindo classification by detailed history, clinical examination and relevant investigations as required and also influence of predictors like age, BMI, ASA score, comorbidities (Diabetes & Hypertension) and laparoscopic versus open versus endourological procedures have been calculated. **Results:** We observed total 64 complications (20.6%); gr I 62.5%, gr II 15.6%, gr III 12.5%, gr IV 3.1%, gr V 6.2%; and complications in laparoscopic (17%) and endourological procedure (17.6%) are significantly less than open (35%). BMI, ASA score and comorbidities (Diabetes and hypertension) have significant influence on complication rates. **Conclusion:** Most of the complications are gr I. Laparoscopic and endourological procedures have less complications than open. BMI, ASA score and comorbidities-diabetes and hypertension have great influence on complications.

UMP 02 – 28

A retrospective analysis of ureteric strictures and their management at a tertiary care centre

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Introduction and Objective: Surgical management of ureteric strictures includes options ranging from placement of ureteral stent, balloon dilatation, endoureterotomy to procedures like ureteric reimplantation, psoas hitch, Boari flap, ureteroenterostomy, intestine interposition, renal mobilization and autotransplant. We performed a retrospective analysis of patients who underwent definitive surgical management for ureteric stricture in our institute. **Methods:** We reviewed 48 patients who underwent surgery for ureteric stricture between January 2012 and June 2015. Preoperative evaluations included clinical history, physical examination, urine culture,

renal function tests. Imaging modalities like ultrasonography, intravenous pyelography, nephrostogram, retrograde pyelogram, computed tomography were done according to the requirements in a particular case to delineate the anatomy before surgery. **Results:** Ureteric strictures were iatrogenic in 75% of cases and secondary to genitourinary tuberculosis in 25% cases. Most of the iatrogenic strictures occurred following surgeries for stone disease e.g. ureterorenoscopy and intracorporeal lithotripsy (40%), ureterolithotomy (28.5%), pyelolithotomy (11.4%), percutaneous nephrolithotomy (5.7%). Gynaecological causes included hysterectomy for dysfunctional uterine bleeding (2 cases) and radiotherapy for carcinoma cervix (1 case). Rare causes were endoscopic lumbosacral dissection (1 case) and presacral neurectomy (1 case). Surgical procedures undertaken were: Ureteric reimplantation (25%), laser ureterotomy (14.5%), ureteroenterostomy (10.4%), psoas hitch (10.4%), Boari flap (8.3%), ureteral replacement using Yang-Monti tube (8.3%), ureteropyelostomy (8.3%). Seven patients (14.5%) with uretric stricture had non-functioning kidneys and underwent laparoscopic nephrectomy. **Conclusions:** Ureteric strictures should be diagnosed and treated expeditiously, as delay in management can lead to a nonfunctioning kidney. There are numerous surgical options available and the modality chosen in a particular case depends on location and length of the stricture.

UMP 02 – 29

Parapelvic cyst mimicking as PUJ obstruction and its management: A case report

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Introduction: Pelviureteric junction obstruction can be attributed to intrinsic and extrinsic pathologies. We report an unusual cause of pelviureteric junction obstruction due to a large parapelvic cyst. The patient presented with intermittent left flank pain. DTPA Scan was done s/o delayed excretion of dye. The diagnosis was arrived at RGP, CT scan. The cyst was managed by laparoscopic deroofting. **Introduction:** Pelviureteric junction obstruction can be attributed to intrinsic and extrinsic pathologies. Intrinsic neuromuscular dysfunction is more frequently encountered than extrinsic abnormalities. The most common extrinsic pathology reported is a lower pole crossing vessel.[2] Uncommonly, parapelvic cyst may be an extrinsic cause of pelviureteric junction obstruction. We narrate a case of parapelvic cyst obstructing the pelvicalyceal system and manifesting as intermittent flank pain. The definitive treatment was attempted by laparoscopic approach. **Case Report:** A 54 year old male presented with intermittent left flank pain for last 6 months. There were no urinary symptoms or fever. There were no co-morbidities. On initial evaluation his vitals were stable. Abdominal and systemic evaluation was normal. Blood parameters including renal function and urinalysis were normal. Ultrasound scan was suggestive of left renal cyst and PUJ obstruction and left pelvic calculi. DTPA confirmed delayed excretion. RGP was done suggested dilated pelvis with malrotated kidney. CT urogram demonstrated a large left parapelvic cyst with stretching of the left pelvis and lower polar vessel with 7 mm pelvic calculi. Laparoscopic pyeloplasty was planned. After deroofting was done after injecting lasix it was found pelvis collapsed well and was draining. Post-operative patient developed urinoma and DJ stenting was done. Patient is asymptomatic and on follow-up

UMP 02 – 30

Nylon nidus for large bladder stones (15 cm) Post-exstrophy repair or self-induced?

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A 17 year young lady approached with complaints of severe dysuria, frequency and fever of 3 weeks duration. She was operated in childhood for repair of exstrophy epispadias complex which has healed uneventfully. She was febrile, toxic and was passing only a few ml. of urine each time. She voided every 10-15 minutes. Occasionally urine was blood stained and purulent. She was moderately built and attained menarche at 11 years of age. Physical examination showed a hard lump in the bladder area which was moving as if it was fully occupying the urinary bladder. She had well healed, bladder

exstrophy scar and bifid clitoris. Her urine culture was positive for *E. coli* and relevant antibiotic was instituted. Her Plain x-ray KUB showed a large elliptical radio-opaque shadow in urinary bladder area. Ultrasonography showed her kidneys were normal and bladder was almost completely filled up with large stone of approx. 15 cm. size. The stone was removed by suprapubic cystolithotomy and she recovered well and was discharged in a few days. A nylon thread was noted from side of the stone which was probably played a key role in forming such a large stone. A 20 year old boy presented with dysuria, poor urinary stream and occasional fever for 1 ½ years. His investigations revealed an irregular stone of 4 cm in urinary bladder with large post-void residue. After controlling fever, he was taken up for endoscopic lithotripsy. He had anterior urethral stricture in penoscrotal area which was relieved by optical internal urethrotomy. As I was breaking the bladder stone, it lacked the usual brittleness and felt like elastic material. Whitish threads were exposed from the core of the stone. After breaking major portion of the stone, I pulled it out with nylon strings. It was not clear how nylon thread got into his bladder, though parents vaguely remember seeing the boy play with wires. May be the boy has passed the wire for self-gratification, which went inside and got knotted and formed nidus for the stone after several years. This emphasizes the need to keep a close watch on children playing with uncommon objects which can lead to long-term complications.

UMP 02 – 31

Post-TURP recurrent life threatening hematuria: A rare cause

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Introduction: Post TURP bleeding is not uncommon. Herein we present a case report of post TURP recurrent severe hematuria due to right internal iliac artery aneurysm protruding into bladder lumen. Case Report: A 60 year old male presented with recurrent massive hematuria following TURP done elsewhere 15 days before. His Hb was 4 gm/dl after 13 units of blood transfusion and repeated clot evacuations. His blood urea, creatinine, BT, CT, PT and APTT were normal. USG abdomen showed multiple clots in the bladder. Cystoscopy revealed clots with a right posterolateral wall unhealthy area. After stabilizing the patient, contrast enhanced CT urography revealed intravesical aneurysm. CT angiography showed fusiform aneurysmal dilatation of vesicle territory of internal iliac artery with maximum calibre upto 8.5 mm, approx. 31 mm long segment. A well defined terminal aneurysm formation, measuring approx. 13.3×15.3×11.6 mm was protruding in urinary bladder lumen. We are planning selective embolization of the lesion. Conclusion: Internal iliac artery aneurysm protruding into bladder lumen presenting as a recurrent massive hematuria is very rare, thus warrants presentation.

UMP 02 – 32

Penile strangulation by PVC plastic pipe ring: case report of sexual perversion

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Penile constriction rings are either used for erotic or autoerotic purposes or to increase sexual performance. Various objects metallic and non-metallic can be used as constricting devices. Potentially, they can become irremovable resulting in reduced blood flow, leading to oedema and sometimes gangrene. We report a case of penile strangulation with a PVC plastic pipe ring presenting as a urological emergency. It was removed with the help of a dental drill after failed attempts of use of orthopaedic instruments. Management of such cases can be challenging and removal of such objects requires help of various orthopaedic and dental instruments. Keywords: Penile strangulation, Sexual perversion, Constriction ring, Dental drill Abbreviations: PVC – Polyvinyl chloride.

UMP 02 – 33

Experience with two piece artificial urinary sphincter

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Introduction: Urinary incontinence following TURP is a rare but dreaded complication. Not only it ruin the patient's life, it also provides a challenge to the urologist. An artificial urinary sphincter (AUS) is a device made of silicon rubber that is used to treat urinary incontinence. An artificial urinary sphincter mimics the biological urinary sphincter by providing a competent bladder outlet during urinary storage and an open unobstructed outlet to permit voluntary voiding. Materials and Methods: We present a case of total urinary incontinence following TURP done elsewhere, managed successfully using a Zephyr two piece urinary sphincter. The sphincter consists of a cuff which goes around the urethra and a reservoir cum activator which sits in between two testicles in scrotum. The cuff is inflated to keep urine from leaking. When urination is desired, the cuff is deflated, allowing urine to drain out. The device was activated 6 weeks after the procedure. Meanwhile the patient was kept on condom catheter drainage. Results: Following activation of the AUS, the patient was absolutely dry. Because of ease of its use, the patient was able to handle the device from day one following activation. Conclusion: The standard three piece AUS requires the reservoir to be inserted in the suprapubic region. Most of the complications mentioned in the literature arise from this third piece. More over, it requires an additional connection along with problems with the same. This is eliminated in the two piece AUS. Thus two piece AUS is a workable and less expensive device. It is associated with less complications as compared with the three piece AUS.

UMP 02 – 34

Our experience with urological injuries during gynecological surgeries

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Introduction: Urological injuries are common complications during pelvic surgery, associated mainly with abdominal hysterectomies and Cesarean section. In women due to close approximation of urogenital tract with uterus, the urinary tract is at risk of getting inflicted by injuries during obstetric and gynecological surgeries. Bladder is the most common organ injured during these surgeries. Though the incidence of ureteral injuries is 0.2-1% during abdominal and pelvic surgery, Obstetric and gynecological surgeries account for approximately 50% of ureteric injuries of which 70% of cases are diagnosed postoperatively. Materials and Methods: We present three different cases of iatrogenic injuries to the urinary tract during Obstetric and Gynecologic procedures which were immediately intervened. There etiology, preventive strategies and treatment aspects are discussed. Indication for surgery, in 1st case was DUB for which vaginal hysterectomy was carried out, 2nd case had posterior wall Fibroid Uterus for which elective abdominal hysterectomy and in 3rd case Elective Cesarean section was done. Results: Among the three cases, 2 patients underwent abdominal surgery and 1 patient undergone vaginal surgery of these 2 patients sustained ureteric injury for which ureteroneocystostomy with DJ stenting was done and 1 patient underwent primary closure of the bladder. DJ stent was removed after 6 weeks and the patients were followed up till 3 months with no complications. Conclusion: Iatrogenic injuries are best managed immediately at the time of injury. Early diagnosis and appropriate management can prevent the occurrence of delayed urological complications.

UMP 02 – 35

Meatal rhinosporidiosis: A rare entity

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Introduction and Objective: Rhinosporidiosis is a fungal infection caused by *Rhinosporidium seeberi*. In spite of global distribution, 90% cases found in asia. It affects different parts of the body. Genito-urinary Rhinosporidiosis is a very rare entity. While reviewing the literature we found very few case series and a few case reports of genito-urinary Rhinosporidiosis. The objective of this case report is to enrich the existing literature about this rare entity. Methods: The patient came with a complain of small growth at the meatus. Clinical diagnosis was codylomata acuminata. As the mass

was involving the whole circumference of the meatus, we excised the mass and did a meatoplasty. Results: Histo-pathological examination revealed Rhinosporidiosis. conclusions: Genito-urinary Rhinosporidiosis though rare, usually presents as a urethral mass protruding through the meatus or hanging from a segment of the meatus. It may also present as bleeding per urethra. Commonly treated by excision and cauterization of the base. Our patient presented with a mass involving whole circumference of the meatus. So we had to do meatoplasty. That's why we consider it as a rare entity and worth reporting.

UMP 02 – 36

Acute idiopathic renal vein thrombosis in adult resembling acute pyelonephritis

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Introduction: Renal vein thrombosis is an unexpectedly encountered condition. It occurs due to a hypercoagulable state in the body, mainly caused by nephrotic syndrome and membranous nephropathy in the adults, other causes being malignancies, trauma, surgery, transplantation and dehydration. Its presentation is variable. In a more common, chronic form, it may remain asymptomatic for a period of time or else may present as pedal edema or varicocele. In acute form, it manifests as flank pain, fever, nausea, hematuria and worsening of renal function. Case Report: We present a case of 25 year old male, presented with acute onset left sided flank pain and nausea for 4 days. USG KUB showed enlarged left kidney with mild alteration of echogenicity and normal pelvi-calyceal system. X-ray KUB showed no sign of calculus. Empirical i.v. antibiotic treatment was started considering possibility of acute pyelonephritis. After 3 days, patient was only modestly improved. Urine culture was found sterile. CT Urography revealed enlarged left kidney with no uptake of contrast and thrombosis of left renal vein. Immediate anticoagulant therapy with LMWH was started and switched over to warfarin after 7 days. Patient showed gradual resolution of symptoms and after 6 months follow up CT showed improved appearance of kidney and complete disappearance of thrombosis. Conclusion: We remind the importance of keeping in mind the possibility of RVT, as an alternative to APN or renal colic and its early diagnosis and treatment.

UMP 02 – 37

Role of Mesna in treating an intractable hematuria in a post renal transplant recipient: A rare case report

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Materials and Methods: A, 56 year male patient, renal transplant recipient 8 yrs back, came with gross hematuria, lower abdominal distension and pain in suprapubic region. On USG, diagnosed with bladder clots. Results: Hematuria continued inspite of cystoscopy and clot evacuation and fulguration of obvious bleeding points. CT Urography with angiography showed no obvious bleeding source. In view of ongoing severe hematuria and fall in hemoglobin, patient was urgently shifted for embolization where in bilateral superior and inferior vesical arteries were embolized along with an AV malformation in transplanted kidney. Even post embolization, patient continued to have hematuria. Finally an attempt of Mesna irrigation was considered and gradually over a period of 48 hours, hematuria settled. Discussion: Severe Hemorrhagic cystitis presents with gross hematuria. Management varies from conservative catheter irrigation to cystoscopy and fulguration of bleeding points. Angioembolization is indicated in ongoing serious hematuria not responding to above measures. Lastly cystectomy might be required in rare situations. In the current case, Mesna has shown its value in preventing the further episodes of hematuria and preventing cystectomy in our patient. Conclusion: Hemorrhagic cystitis can pose a serious urological challenge. Multiple options are available for treatment and prevention of hematuria, but Mesna saved the day for this patient.

UMP 02 – 38

Expected turns unexpected-histopathological finding of xanthogranulomatous pyelonephritis in a resected specimen of radical nephrectomy

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Xanthogranulomatous pyelonephritis is a rare type of renal infection characterised by granulomatous inflammation with giant cells and foamy histiocytes. The peak incidence is in the sixth to seventh decade with a female to male ratio of 2:1. It is rare in children. We present a case of a 62 year old diabetic female who presented with occasional left loin pain. Contrast enhanced computed tomography revealed a heterogeneously enhancing solid lesion arising from the kidney. The change in Hounsfield unit was found to be more than 30. She was provisionally diagnosed to be a case of renal cell carcinoma and underwent radical nephrectomy. Biopsy report proved it to be a case of xanthogranulomatous pyelonephritis. She recovered well and is under follow up.

UNMODERATED POSTER SESSION - III

UMP 03 – 01

Penile manipulation: A commonest aetiology of penile fracture

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According to the published literature vigorous vaginal intercourse with women on top position is the commonest aetiology across the globe including India. On the contrary, 6 out of 7 patients of penile fracture who came to our emergency gave history of penile manipulation as the causative factor during sexual excitement. All the patients were managed by emergency exploration and repair. Thus the incidence and aetiologies of penile fracture vary according to geographic region, sexual behaviour, marital status, and culture. In this part of India, penile manipulation is the regarded as the commonest aetiology.

UMP 03 – 02

Post radiotherapy colovesical fistula: A case report

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Introduction: Colovesical fistula is not a common entity. Colovesical fistula following radiotherapy still being rare, and because of its rarity there is insufficient experience in the management of colovesical fistulas to develop a clear algorithm. Here we report a case of colovesical fistula following radiotherapy. Case Report: A year old female presented to us with history of fecaluria, pneumaturia and recurrent UTI of 3 months. Patient was a diagnosed case of carcinoma cervix for which she received radiotherapy 15 months back. Urine examination revealed pyuria and bacteruria. CT, Barium Study and Cystoscopic Examination revealed a fistulous connection between sigmoid colon and dome of urinary bladder. Patient was explored, The bladder was separated from the sigmoid colon and a diverting colostomy was done, fistulous opening was resected and the bladder closed in layers. Discussion: Colovesical fistula following radiotherapy is a rare entity accounting to 3%, the rest causes being diverticulitis (56.3%), cancer invasion (20.1%), inflammatory bowel disease (9.1%). In females, due to interposition of reproductive organs the above condition is comparatively less common although following hysterectomy the incidence may be the same. The most common symptoms associated with colovesical fistula is pneumaturia, dysuria (45%), fecaluria (36%), hematuria (22%), orchitis (10%), abdominal pain and diarrhea. In our patient, the main symptoms was fecaluria and abdominal pain. The principle of surgical procedure is to separate the gastrointestinal and genitourinary tracts. In patients with non obstructing lesion and without contamination a single stage surgery with anastomosis is quite satisfactory. Conclusion: Colovesical fistula is a late-onset complication following radiotherapy. Several kinds of diagnostic tools may help confirm the presence and nature of the fistula, and therefore careful choosing of the appropriate tool is important. Resection of the fistulous tract with primary closure of bladder defect and diverting stoma is usually the preferred procedure.

UMP 03 – 03**Egg-shell kidney: A rare presentation of ureteropelvic junction obstruction****Shrivatava Prashant, Nayyar Rishi, Seth Amlesh, Dogra Prem Nath**

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Calcification in a solid renal mass has traditionally been considered to indicate a malignant process. However, calcifications can be seen in benign pathologies also. We present two cases of complete peripheral rim (egg-shell) calcification of kidney. Such complete renal rim calcification though reported in an echinococcal cyst, renal artery aneurysm or arterio-venous fistula, renal tuberculosis and failed kidney allografts, has never been previously reported in case of Ureteropelvic Junction Obstruction. Patient-1, a 22 yr. Male presented with lump right upper abdomen since childhood, pain left flank with history of lithuria, was found to have left solitary functioning kidney with staghorn calculus with right renal fossa cystic mass with peripheral rim calcification. Patient-2, a 32 yr. male presented with right flank pain since 4 years with history of single episode of hematuria in recent past, was found to have left lower ureteric calculus with right small contracted kidney with peripheral rim calcification. Both the patients underwent simple nephrectomy for non-functioning right kidney after stone clearance on the left side. The histopathology showed features suggestive of chronic pyelonephritis with extensive areas of dystrophic calcification. The intra-operative findings and histopathology suggested a Ureteropelvic Junction Obstruction. Conclusion Complete renal rim (Egg shell) calcification could be a rare presentation of Ureteropelvic Junction Obstruction.

UMP 03 – 04**A pulmonary complication following urological emergency in a pregnant lady****Subodh K Regmi, Vikal C Shakya, Jitendra Pariyar, Anang Pangeni, Anir RM Shrestha**

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Introduction and Objective: Renal angiomyolipomas are benign but progressive hamartomas frequently associated with Tuberous Sclerosis Complex (TSC) and show increased growth as well as high incidence of complications during pregnancy. We present a case of renal angiomyolipoma which presented with life threatening haemorrhage during pregnancy and later developed features of lymphangioleiomyomatosis (LAM). **Methods:** A 28 years old lady presented to the emergency room (ER) with amenorrhoea for 4 months and sudden onset of pain abdomen with features of intra-abdominal haemorrhage. She had been treated for primary subfertility with clomiphene citrate prior to her conception. Emergency ultrasound was highly suspicious of a 25 X 22 cm sized right adnexal dermoid cyst with haemorrhage with a single live fetus of 15 weeks size. She was shifted to the operating room due to failure of conservative management. Exploration revealed normal bilateral adnexae with a large right renal tumor with intratumoral haemorrhage with dilated superficial veins. A right radical nephrectomy was done. **Results:** The patient made an uneventful recovery in the hospital. The histopathology revealed angiomyolipoma of the Right kidney. However, the patient spontaneously aborted the fetus 1 month later and after 3 months presented with spontaneous pneumothorax. Upon HRCT she was diagnosed to have Pulmonary LAM on the basis of multiple small lung cysts. An intercostal drainage catheter was placed and pleurodesis performed. She was clinically worked up for TSC which was unremarkable. **Conclusions:** AML in pregnancy can present with life threatening haemorrhage. Multidisciplinary management is required in view of the complications during pregnancy and the association of LAM with large AMLs

UMP 03 – 05**Page kidney in Wunderlich syndrome causing acute renal failure and urosepsis: Successful timely minimally invasive management of a devastating clinical entity****Vijayganapathy S, Karthikeyan VS, Mallya A, Kochhar G, Sreenivas J, Keshavamurthy R**

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Introduction: Wunderlich syndrome is a rare clinical entity characterized by acute onset spontaneous, non-traumatic renal hemorrhage into the subcapsular and perirenal spaces. It can be fatal if not promptly recognized and treated aggressively. **Methods:** Case report and review of pertinent English literature. **Results:** A 32 year old male diagnosed elsewhere as acute renal failure presented with tender left loin mass, fever and hypovolemic shock with serum creatinine 8.4 mg/dl. He was started on higher antibiotics and initiated on hemodialysis. Ultrasonogram, Non-contrast computed tomography (NCCT) and magnetic resonance imaging showed bilateral perirenal subcapsular hematomas – right 3.6 x 3.1 cm and left 10.3 x 10.3 cm compressing and displacing left kidney, fed by capsular branch of left renal artery on CT angiogram. He persisted to have febrile spikes, renal failure and urosepsis, since initial aspirate was bloody, he was managed conservatively. Repeat NCCT 10 days later revealed left perinephric abscess and percutaneous drainage (PCD) was done. Patient improved, serum creatinine stabilized at 2 mg/dl without hemodialysis and PCD was removed after 2 weeks. **Conclusion:** Bilateral idiopathic spontaneous retroperitoneal haemorrhage with renal failure is a rare presentation. This case highlights the need for high index of suspicion, the role of repeated imaging and successful minimally invasive management with timely percutaneous drainage and supportive care.

UMP 03 – 06**Benign multilocular cyst (cystic nephroma) in an infant****Giriraja V, Ravichandran R**

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Introduction: MLCN is a rare, non-familial tumour which has a bimodal age and sex distribution. It was first described in 1892 as cystic adenoma of the kidney and over 200 cases have been reported in the literature so far. In the paediatric population it has a 75% male predilection, whereas in later life (typically in the 5th-6th decades) females are more predominantly affected. The spectrum of cystic renal neoplasms includes both benign and malignant tumors and the order is as follows: benign multilocular cyst, multilocular cystic renal cell cancer and cystic renal cell cancer. Gross similarities among multicystic tumors of the kidney may cause conflict in the diagnosis and treatment of these lesions. **Methods:** A 2 1/2 months male baby, presenting with abdominal mass and respiratory distress, was evaluated with USG and CT and diagnosed as cystic mass? Wilms tumour? Cystic nephroma. After stabilization initially, patient underwent nephrectomy. **Results:** Post operatively baby was active and feeding well and discharged in stable condition. **Conclusion:** The clinical significance of cystic nephroma is its benign behavior, and it should be distinct from other more common pediatric malignant neoplasms. Neither clinical presentations nor radiological studies can predict the histologic pictures of cystic renal tumor of childhood. Surgical intervention and histopathologic examination are necessary for the final diagnosis. Noninvasive follow-up is recommended after the complete resection.

UMP 03 – 07**Complete penoscrotal transposition: Report of a rare case****GnanaPrakash P, Prakasa RB, Rambabu B, Sridhar P, Suman G, Faiz H**

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Introduction: Complete penoscrotal transposition (CPST) with an intact scrotum is a rare anomaly in which the scrotum is located cephalic to the penis. Fewer than 20 cases have been reported in the literature. It is often characterized by major associated malformations such as renal agenesis, ectopic pelvic kidney, or dysplastic kidneys. There are few cases reported in the literature, and few descriptions of the technique for correction. We describe a new case of CPST and its correction in a two stage procedure. **Case Report:** A 2 year male child presented to us with CPST. On examination a flaccid penis with hypospadias without chordee was found beneath the scrotum. The scrotum and testicles were well developed. Abdominal ultrasound and intravenous urography revealed malrotated kidney on right side with multicystic kidney on left side with

normal renal function tests. As a stage 1 procedure we have operated and transposed the penis superior to the scrotum after adequate mobilization of the penis. Repair of hypospadias is planned after 6 months. Conclusion: In CPST careful clinical evaluation should be done to rule out other anomalies. There is no standard documented technique for correction of CPST. Unlike the previously reported 3 - stage procedures in the literature, we describe a 2 - stage repair. Surgical correction is possible in select cases by achieving a satisfactory penis position with excellent cosmetic results.

UMP 03 – 08

Isosexual precocious puberty with leydigcell tumour in a child

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Introduction: Leydig cell tumors (LCT) are uncommon neoplasms arising from gonadal stroma, accounting for 1-3% of all testicular tumors in adults and 4% in prepubertal children. They are mostly benign but 10% are malignant. Children with leydig cell tumor present with isosexual precocious puberty. In adults, it usually presents with feminine sexual characters due to peripheral aromatization of testosterone to estradiol. We report a case of Leydig cell tumor of testis in a patient presenting with precocious puberty. **Case Report:** A 7-yr-old boy was presented with recent growth spurt with deepening of the voice for six months. The parents noticed a right testicular swelling. Clinical examination revealed acanthosis present, acne, dry & course skin with scaling, masculine voice, axillary & pubic hair present, stretched penile length of 11.5 cm, was large for his age, enlarged right testis (volume 5 X 3 cm), firm in consistency. AFP - 1.14 ng/ml, HCG - 0.53 ng/ml. The levels of testosterone (10.09 ng/ml), FSH and LH were normal (0.8 µIU/ml and 0.04 µIU/ml respectively). Scrotal ultrasound examination showed a well defined, lobulated, heterogeneously hypoechoic mass involving right testis with multiple microcalcifications with central and peripheral vascularity. He underwent right high inguinal orchidectomy. Pathological examination revealed: Gross – well circumscribed brown nodule – 3.5 x 3.5 x 2 cm. Microscopy-tumour consists of cells with brightly eosinophilic cytoplasm. No evidence of malignancy - “LEYDIG CELL TUMOUR.” Post operative testosterone - 0.01 ng/ml, FSH and LH were normal. **Conclusion:** Boys with androgen-secreting leydig cell tumour present with signs of precocious puberty. They are usually benign with good prognosis. The endocrine profile and imaging investigations need to be repeated periodically.

UMP 03 – 09

Anterior urethral valve: A case report

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Objective: Posterior urethral valves (PUV) are the commonest cause of obstructive uropathy in boys. Anterior urethral valves are rare causes of urinary obstruction in boys and are ten times less frequent than PUV. We present our experience with a such case. **Patients and Methods:** A 7 days old child was brought to us with swelling of penis which increased at the time of voiding and reduced after compression with dribbling of urine from the meatus. Hb and blood biochemistry were normal. USG KUB was normal. MCU shows massive dilatation of penile urethra. Now at the age of 8 months we are planning for excision of the valve with reduction urethroplasty. **Conclusions:** AUV are uncommon causes of infravesical obstruction in males and because of its rarity, we are presenting it.

UMP 03 – 10

Renal cell carcinoma in tuberous sclerosis

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Aim: To report a rare case of RCC and tuberous sclerosis. **Methods:** An 8-yr-old boy with seizures, developmental delay and family history of tuberous sclerosis was admitted with complaints of hematuria. Clinical examination revealed adenoma sebaceum, ash leaf macules and shagreen patches. Ultrasonogram and CT abdomen revealed bilateral cystic areas

in kidneys. Left kidney also revealed a large tumour. CT brain revealed small astrocytoma and Echo revealed small rhabdomyoma. **Results:** Left radiacal nephrectomy was performed and the histopathology revealed stage I renal cell carcinoma with areas of angiomylipoma. **Conclusion:** RCC is very rarely reported in the first decade in a child with tuberous sclerosis.

UMP 03 – 11

Impacted vesicourethral calculus: Rare complication of failed vesico urethro-vaginal fistula repair

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Introduction: Urogynecological fistula as result of obstructed labour is a known entity especially in the developing countries This results in great deal of inconvenience and discomfort both physically and mentally to patients. The formation of large impacted vesico urethral calculus as a complication following failed repair of the fistula is still rarer. **Methodology:** A 70 years old female presented with complaint of passage of urine per vaginum since obstructed labour of her last child 35 years ago. Two unsuccessful attempts to repair the fistula both trans abdominally and by using Martius flap per vaginally were made 34 and 32 years ago respectively. Per vaginal examination revealed deficient anterior vaginal wall with a large stone palpable. X Ray revealed three stones in the bladder occluding the urethra. **Results:** The patient was operated for open cystolithotomy in the first sitting, which revealed unhealthy necrosed posterior wall of bladder and urethra communicating with the vagina. Later cystoscopy revealed a large vesico-urethro-vaginal fistula. The patient was operated for open transabdominal repair of fistula with vesicourethral anastomosis with omental interposition in between in the second sitting. **Conclusion:** Secondary bladder stones due to prior gynecological surgery (fistula in this case) is a known but rare complication, however the formation of such large calculi in the case of prior failed attempts to repair the fistula are still rarer. Hence, regular follow up in the cases of uro-gynecological fistula needs to be highlighted.

UMP 03 – 12

Erectile dysfunction in patients undergoing urethroplasty: A pre- and post-operative assessment

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Introduction and Objectives: Erectile dysfunction is present in about 2.3% patients of stricture urethra. Controversies exist whether urethroplasty results in erectile dysfunction. The objective of our study is to have the pre and post operative incidence of erectile dysfunction in patients of stricture urethra and incidence of vascular compromise following urethroplasty. **Methods:** Our prospective longitudinal cohort study included sexually active men with urethral stricture undergoing any form of urethroplasty. Patients who failed the Kesslers mental distress scale were excluded. Pre-operative and postoperative assessment was carried out by International Index of Erectile Function – 5 questionnaire and Pharmacological Colour Doppler Ultrasonography. The cavernous artery flow and resistive index was measured. Post operative assessment was done at 6 weeks and 6 months. The results were analyzed statistically. **Results:** Our study included 35 patients undergoing urethroplasty; 14 underwent anastomotic, 21 underwent buccal mucosal graft, or lingual mucosal graft procedures. Before urethroplasty; 25 patients; 16 in graft; had mild and 4 patients; 3 in graft; had mild-moderate and 6 patients had no erectile dysfunction. Post operatively 26 patients had mild; 15 in graft; and 4 patients; 2 in graft; had mild-moderate and 5 patients had no erectile dysfunction. The peak systolic flow less than 25 was in 1 patient; anastomotic; preoperatively and 4 patients; 2 in anastomotic; post operatively and resistive index less than 0.8 were in 3 patients; 2 in anastomotic; postoperatively. **Conclusions:** Our study concluded anastomotic or augmentation urethroplasty was not a significant cause for erectile dysfunction and vascular compromise.

UMP 03 – 13

Penoscrotal (corporal) injury by stone (tiles) cutter machine: A case report

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Introduction: Traumatic injuries to genitourinary tract are seen in 2.2-10.3% of patients admitted to hospitals. Of these cases 1/3rd to 2/3rd cases are associated with injury to external genitalia. Corporal injuries usually follow forceful injury to erect penis during coitus, but it is very rare due to electrically driven tiles cutter machine. **Case Report:** We report a case of a 35 years old male who met with an accident while cutting the tiles by an electrically driven cutter machine in a tiles factory. On examination he was hemodynamically stable and was having a large wound over penoscrotal area of length approximately 20 cm, extending to left thigh from coronal sulcus, with a corporal injury measuring 6 x 2 cm and active oozing from the site. He was taken for surgical repair. Tunica albuginea delineated all around and sutured with vicryl 2-0. Second layer of Buck's fascia was sutured with vicryl 3-0. Rest of the wound was closed in layers after refreshing the edges. Catheter was kept for 3 days and the patient was discharged on 7th day after removal of sutures. Patient had functionally normal penis at 6 month's follow up. **Discussion:** Injury to penis is relatively uncommon, but several reports of penile injuries related to machinery accidents have been reported. The mechanism of injury affecting male genitals is not consistent with any particular pattern. The need of appropriate clothes for machinery workers is well recognized because many injuries have been reported among machine operators wearing loose clothes, as seen in our case as well. Current treatment recommendations for corporal injury is proper layered repair with delineation of tunica albuginea, local corporal debridement and closure of tunical lacerations which was done in our case too. **Conclusions:** Penoscrotal (corporal) injury due to electrically driven Tiles cutter machines is very rare. Prompt attention and intervention will always be rewarding. Work safety rules should be applied to formal and informal sectors as well.

UMP 03 – 14

Ileal ureter for pan-ureteral stricture of tubercular origin

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Tuberculosis has been a leading public health problem, especially in the developing countries of ASIA, causing approximately 3 million new cases & 7 lakhs deaths every year. Genito urinary tuberculosis - the second commonest extra pulmonary form of TB, caused by metastatic spread of organism through blood stream. 8-15% of tubercular patients suffer from GU-TB. It affects males and females equally & is commonest in the 4th decade of life. The kidney is usually the primary organ affected in the urinary system & most other parts of the urinary tract are involved due to direct extension. Its insidious onset and difficulty in diagnosis may lead to delay in treatment. This may result in serious complications such as destruction of kidney or severe involvement of the ureter & urinary bladder. Management of ureteral stricture poses both a diagnostic dilemma as well as taxes the surgical skills of the reconstructive surgeon. If not properly managed the kidney may be lost. Similarly, the clinician should be careful in declaring the prognosis of these cases as the outcome of ureteral involvement is also dependant on the extent of renal involvement. We report here an unusual case of 20 year old male patient with pan-ureteral tuberculous stricture for who underwent successful ileal ureter replacement. The purpose of this case report is to discuss management for tuberculous pan ureteric stricture at unusual age and role of stenting prior to AKT may save from life threatening complication of pan-ureteral stricture.

UMP 03 – 15

Diagnosis and treatment of BK virus-associated transplant nephropathy in our center

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The incidence of polyoma virus infection, particularly that of BK virus (BKV) in kidney transplant recipients has been increasing steadily since early 1990s. The diagnosis is generally made by a renal allograft

biopsy. However the diagnosis can sometimes be difficult because of the pathological similarities between BKV associated nephropathy (BKVAN) and acute cellular rejection. In addition to the difficulties in making a diagnosis, the treatment of BKVAN can also be very complex. Reduction in immunosuppression is generally advocated as the initial therapeutic option for the management of BKVAN. Despite reduced immunosuppression, BKV can persist in the renal allograft and lead to gradual loss of kidney function. Hence, new therapeutic options are being evaluated for treatment of BKVAN. Cidofovir, an anti-viral agent with known nephrotoxic effects, has been successfully used in very low doses to treat patients with BKVAN, with serial measurement of the blood and urine BKV load with PCR assays. More recently several other agents have also been utilized to treat BKVAN, with variable success. We are presenting our experience with BKVAN in our center. Out of five cases of BKVAN, one had undergone graft nephrectomy followed by second renal transplantation.

UMP 03 – 17

Bilateral subconjunctival haemorrhage in patients with stricture urethra

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Introduction and Objective: Bilateral subconjunctival haemorrhage is usually caused due to straining, sneezing, coughing, or vomiting. Other causes are conjunctivitis and trauma. We report here two cases of severe stricture urethra who presented to us with bilateral subconjunctival haemorrhage. **Materials and Methods:** Case History - Two patients presented to us with bilateral subconjunctival haemorrhage. First patient was a known case of carcinoma bladder who had underwent repeated transurethral resection. Second patient was a known case of balanitis xerotica obliterans. Both patients had to strain for more than half an hour to empty bladder once, since many months. On evaluation both patients were found to have long segment stricture urethra. Both these patients underwent subsequent augmented urethroplasty and in about 3 weeks subconjunctival hemorrhage resolved on its own. **Conclusion:** Bilateral subconjunctival hemorrhage could be presenting sign of stricture urethra in patients who take long time to empty their bladder. It is a new sign of patients of stricture urethra who strain severely.

UMP 03 – 18

Single stage reconstruction of panurethral strictures using buccal mucosal grafts

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Introduction: Single stage reconstruction of long, complex urethral strictures is technically demanding and the use of buccal mucosal graft may require the use of ventral onlay or dorsal onlay or both the technique. We describe our experience in the management of such strictures with these techniques. **Materials and Methods:** We did a prospective study and included men with panurethral stricture after doing routine investigations, ultrasonography, uroflorometry and urethrogram. Total 10 men (mean age 32.5 years) underwent single stage reconstruction through midline perineal incision for panurethral, multiple segment and focally dense strictures of mean length 11.2 cm (range 8-17 cm). Out of them, 8 patients underwent dorsal onlay buccal mucosal graft and 2 patients underwent combined dorsal and ventral onlay buccal mucosal graft. **Results:** Period of follow up ranges from 6 months-24 months (median 15 months). Out of 10, 1 patient developed fistula and 1 patient presented with recurrence. Recurrence of stricture was managed with visual internal urethrotomy successfully and patients with fistula underwent repair without any complications. Successfully treated patients are voiding well with a good stream. **Conclusions:** Successful outcome of single stage reconstruction of long complex strictures can be achieved with buccal mucosal graft in one stage through a single midline perineal incision. where proximal bulbar urethra is involved, ventral mucosal onlay is needed additionally.

UMP 03 – 19**Double urethra!!****Premkumar K, Mohan Keshavamurthy, Shakir Tabrez, Shreeharsha Harinath, Raj KB, Karthik Rao B**

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A 60 yr old gentleman came to us with a complaint of acute urinary obstruction. On history and evaluation he was found to be on perineal urethrostomy for a failed urethral surgery about 17 yrs back. He had a large bladder clot as a result of UTI (patient was on ecosprin also). In view of a stenosed urethrostomy, SPC done in emergency. RGU showed small calibre penile urethra with abrupt cut off at the distal bulbar urethra. Patient had a revision perineal urethrostomy with clot evacuation. Two months later urethral reconstruction was planned and on exploration was found to have a double urethral lumen, the superficial one being about 10 cm and the deep native urethra narrow and cut off at the perineal urethrostomy level. A dorsal and ventral Buccal mucosal patch urethral reconstruction was performed and urethra rested for 3 weeks. On pericath RGU at 3 weeks the caliber was satisfactory with no intravasation on catheter and SPC removal patient has good flow with no leak or fistula. This case is presented in view of atypical presentation and abnormal (iatrogenic) double urethra, managed successfully

UMP 03 – 20**Management of vesicocutaneous fistula originating through bladder diverticulum after open prostatectomy****Purkait Bimalesh, Singh Siddharth, Yadav Manoj, Patodia Madhusudan, Sankhwar Satyanarayan**

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A 65 years old male presented with passage of urine through suprapubic region for last 2 months. He had open prostatectomy for benign prostatic enlargement (BPH) 4-years back. Patient remains asymptomatic for 3 years after surgery but again developed thinning of urinary stream and straining during voiding for last 1 year. An abscess was developed at scar of previous surgery which gradually rupture and a urinary fistula developed at that site. RGU/MCU shows normal anterior urethra and severally trabeculated bladder with multiple diverticulae and inadequate filling of posterior urethra. CECT Abdomen was suggestive of thickened trabeculated bladder with a diverticulum at the dome of bladder with fistulous tract communicating to anterior abdominal wall. On retrograde cystoscopy prostatic urethra stricture and multiple false tracts were found and guide wire could not be negotiated into the bladder. On antegrade cystoscopy through fistulous tract scope negotiated in the bladder through wide mouth diverticulum (from which vesicocutaneous fistula was formed). Guide wire could be negotiated through stenosed bladder neck and delivered from meatus. Endodilation of posterior urethra and bladder neck done over guide wire up to 22 Fr and 16 Fr perurethral catheter was placed, suprapubic catheter was removed. Fistulous tract gradually healed over a period of 2 weeks and PUC removal was done after 3 weeks. At the follow up of 6 months patient was voiding well without recurrence of vesicocutaneous fistula. In our case fistulous tract was very small and fistula was arising from wide mouth diverticula, so endoscopic management becomes successful.

UMP 03 – 21**Urethral hemangioma: Rare case of bleeding per urethra****Raghuveer, Deepak Bolbandi, Prathvi**

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Urethral hemangiomas are rare benign vascular tumors which on histology consist of thin walled vascular spaces lined by endothelial cells. Their origin still remains an enigma. It has been suggested they originate from unipotent angioblastic cells that fail to develop into normal blood vessels. The most common type is cavernous hemangioma. Treatment may be extremely challenging and ranges from transurethral approach to open reconstructive surgery

UMP 03 – 22**Outcome after internal urethrotomy: Efficacy of self urethral calibration with or without steroid ointment versus no calibration****Saha B, Mitra N, Kumar J, Mukherjee C, Sharma PK, Mandal SN, Karmakar D**

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Introduction and Objective: Optical internal urethrotomy (OIU) is considered to be first line management for short segment bulbar urethral stricture. But, it carries significantly high recurrence rate. Our aim is to evaluate the role of urethral self calibration with steroid ointment, with plain lignocaine gel & without any calibration following internal urethrotomy. Methods: 60 male patients with primary, short segment bulbar urethral stricture < 1.5 cm were included. Patients with previous urethroplasty, multiple or long stricture were excluded. After optical internal urethrotomy patients were randomized into 3 groups. Group 1 did not performed any urethral calibration, group 2 performed urethral calibration with lignocaine 2% gel & group 3 with triamcinolone ointment. Post operatively uroflowmetry was obtained on 1, 3, 6, & 12 month & at the time of obstructive flow complaints. Results: Baseline characteristics of patients, mean follow up duration, stricture etiology were not significantly different between groups. Post operative Qmax at 1 month in group 1 (19.2 ± 3.2), group 2 (18.8 ± 2.6) & group 3 (19 ± 3) did not differ significantly ($p > 0.05$). 12 patients in group 1 (60%), 5 patients in group 2 (25%) & 3 patients in group 3 (15%) had resticture. At 12 month Qmax in group 1 was significantly low as compared to group 2 & 3 ($p < 0.05$). Between group 2 (13.5 ± 3.2) & 3 (15.2 ± 2.1) Qmax was more in group 3 but not statically significant. Conclusion: Application of triamcinolone ointment during urethral self calibration following OIU decrease recurrence rate. This is effortless, low in complication & can be used as an adjunctive during CIC.

UMP 03 – 23**Extra intestinal gastrointestinal stromal tumor of the kidney: A rare case report****Harshavardhan A, Ram Reddy C, Vidyasagar S, Rahul Devraj, Ramachandriah G**

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Introduction and Objective: Extra Intestinal Gastrointestinal stromal tumor (EGIST) is a very rare occurrence in the kidney. Very few cases have been reported in the literature. Extraintestinal stromal tumors by definition arise from outside GI tract but histologically resemble their counterparts. The tumor usually presents as a painless, slow-growing renal mass. Surgical resection of the tumor associated with adjuvant chemotherapy seems efficient in its treatment. This case is being reported as it is a rare presentation. Methods: We report a case of a 45-year-old female who was diagnosed of EGIST and was treated by tumor resection and chemotherapy. Results: Patient underwent left radical nephrectomy and the specimen was sent to pathology. Spindle shaped cells were seen with elongated nuclei. An Immunohistochemistry study was done and was positive for smooth muscle actin (SMA) and CD117 (CKIT) and negative for DOG, HMB and CD 34. HPE was suggestive as EGIST (high risk category) with smooth muscle differentiation. Conclusion: The kidney is a rare location for EGIST and its histological characteristics are the same as that found in other organs. Information from the literature shows that radical nephrectomy seems to be the underlying treatment for this tumor. Imatinib is essential component in the adjuvant setup as this tumor falls in the high risk category. EGIST of kidney is a very rare but important differential diagnosis for renal mass. The primary management is radical nephrectomy followed by chemotherapy and subsequent long-term follow-up.

UMP 03 – 24**Unusual presentation of upper tract transitional cell carcinoma****Agarwal Rishi, Chibber Percy, Hedayatullah**

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Introduction and Objective: Transitional cell carcinoma spreads along the urothelial cellular lining. However presentation of TCC involving the entire upper urinary tract with bladder is extremely rare. **Methods:** A 34 year old man presented with history of hematuria associated with on and off pain in left flank for last 2 months. Clinically mass palpable in left lumbar region. Radiological imaging revealed heterogeneous mass lesion in entire urinary tract with hydronephrosis. The mass was extending beyond VUJ in the bladder. Cystoscopy revealed, polypoidal mass protruding from left VUJ. TURBT with laparoscopic radical nephroureterectomy with lymphnode dissection with wide bladder cuff excision done. **Result:** Histopathology revealed (a) high grade papillary TCC involving left kidney, ureter and surrounding fat with reactive hyperplasia of lymphnodes (b) high grade solid urothelial carcinoma of bladder. Considering patient age and to consider bladder preservation Now planned for adjuvant chemotherapy and is on regular follow up. **Conclusion:** An upper tract tumour affects the lining of urinary tract from calyces to the distal ureter. Unlike bladder urothelial tumour, these are rare. TCC are invasive and epithelial spread may occur in both antegrade and retrograde manner. But involvement of entire urinary tract with bladder synchronously is very rare.

UMP 03 – 25

Upper tract adenocarcinoma in case of long standing urinary diversion (ileal conduit for spina BIFIDA): A rare case report

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We report a case of upper tract adenocarcinoma with gross hydronephrosis with parenchymal thinning in a patient with long standing urinary diversion ileal conduit for spina bifida – a rare case report. Here 55 year old female presented with gross intermittent hematuria with passage of clots and left flank pain of one month duration. Pt has urinary diversion ileal conduit done for spina bifida with fecal and urinary incontinence at age of 10 in 1966. On evaluation she diagnosed to have left gross hydronephrosis with parenchymal thinning and diffuse enhancing nodular thickening of left upper tract, suggestive of upper tract malignancy. Patient underwent radical left nephroureterectomy with removal of cuff of ileal conduit. Histopathology report was adenocarcinoma kidney intestinal type well differentiated involving pelvicalyceal system and ureter, ileal conduit cuff showed squamous metaplasia. Very few such cases have been reported in literature, of upper tract adenocarcinoma in long standing urinary diversion ileal conduit for a benign

UMP 03 – 26

Renal carcinoid tumour: A diagnosis of surprise

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Forty years old female presented with heaviness right side of abdomen for one year. This lump was associated with symptoms of gastritis with epigastric pain, nausea and non bilious vomiting. On examination there was a no definite lump palpable rest of abdomen unremarkable. On USG there was hypoechoic mass lesion of size 65 x 35 mm was present in right kidney in pelvicalyceal region of right kidney. On CECT well defined mass lesion right kidney in interpolar region was present. It was enhancing with exophytic component of size 8 x 5 cm. Patient was investigated and all hematological investigations were normal ie. LFT's, RFT's, ECG, Chest xray. Patient operated and right radical nephrectomy was done. To our surprise it turns out to be a case of carcinoid tumour. This patient was a case of solitary carcinoid tumour with no symptoms suggestive of it. Post operative CECT of abdomen was normal. There was negative 24 hour 5 HIAA levels. Now case of renal carcinoid tumour is rare diagnosis. Only approximately 90 case had been reported in literature. About 60% occurs on right side with female predilection. Some times carcinoid tumor of kidney is associated with horse shoe kidney, teratoma or polycystic kidney disease. Primary carcinoid tumours of the kidney are often well differentiated rare tumours with an indolent course treated with nephrectomy with excellent prognosis. They often pose diagnostic dilemmas because of their rarity,

minimal awareness about them, and also because of similar presentation with other renal tumours.

UMP 03 – 27

An atypical presentation of chromophobe renal cell carcinoma: A case report

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Introduction: Chromophobe renal cell carcinoma is an uncommon subtype of Renal cell carcinoma. It is diagnosed mainly in sixth decade of life. Its incidence is similar in both men and woman. Hence we report a 32 year old female patient with Chromophobe Renal Cell Carcinoma and discuss the relevant literature. **Case Report:** A 32 year old female presented with vague abdominal pain since 4-5 months with normal examination. Ultrasonography of abdomen revealed a benign right renal mass. CT abdomen and pelvis showed a enhancing right renal upper pole mass of 6.9*4.4*4.1 cm. Under the clinical diagnosis of possible renal cell carcinoma, right radical nephrectomy was performed. The cut surface appearance of the tumor was homogeneous, grey-beige and solid and histology revealed the diagnosis of Chromophobe Renal Cell Carcinoma **Conclusion:** Chromophobe Renal Cell Carcinoma is a rare type of Renal Cell Carcinoma with potential to present in younger population. In view of its malignant nature, one should not overlook its presence.

UMP 03 – 28

Mid pole renal cell carcinoma with a synchronous solitary ipsilateral adrenal metastasis: A rare presentation

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Introduction: Adrenal involvement in renal cell carcinoma can be contiguous or by hematogenous route. However synchronous solitary adrenal metastasis in renal cell carcinoma is rare. The risk of adrenal metastasis is high when tumor has large size, multifocality, advanced T stage, located on the left side and upper pole of kidney. Here we report a case of mid pole renal cell carcinoma with solitary synchronous ipsilateral adrenal metastasis. **Case Report:** An evaluation of a 32 year old gentleman who presented with left sided flank pain and hematuria of 6 month duration, showed ill-defined focal heterogeneity in lateral aspect of mid pole region of left kidney on Ultrasonography. CECT showed a well-defined soft tissue lesion of size 5.2 X 5.4 X 4.2 cm seen in mid polar region of left kidney with heterogeneous contrast enhancement, extending into lateral perinephric space abutting pelvi calyceal system. Another well-defined enhancing soft tissue lesion of size 2.9 X 1.8 cm seen in left adrenal gland without any evidence of other organ involvement or lymphadenopathy. After Left radical nephrectomy, histopathology showed renal cell carcinoma of clear cell type with adrenal showing metastasis from the same neoplasm. **Conclusion:** Isolated synchronous ipsilateral metastasis to adrenal gland in a mid pole renal cell carcinoma is rare. Adrenal invasion is an independent predictor of poor prognosis and radical nephrectomy with adrenalectomy is the treatment of choice in these patients.

UMP 03 – 29

Paraganglioma of the urinary bladder: A histological surprise

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Introduction: Paraganglioma of the urinary bladder is a very rare tumor. Diagnosis is made by histopathology and immunohistochemistry. **Case Report:** A 51 year female presented with lower urinary tract symptoms and left sided flank pain without history of hypertension. During work – up in ultrasound a polypoidal hyper echoic lesion of 43 X 20 mm size found near right postero-inferior wall of urinary bladder with mild increased vascularity. Cystoscopy followed by transurethral resection of bladder tumor done. Histopathology report confirmed the diagnosis of bladder Paraganglioma. Immunohistochemistry was positive for chromogranin

and synaptophysin. Conclusions: Paraganglioma of Urinary bladder may be misdiagnosed as urothelial tumors but histopathological examination and immunohistochemistry will give accurate diagnosis.

UMP 03 – 30

Cystadenoma: A rare benign neoplasm of the seminal vesicle

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Introduction: True benign primary tumors of seminal vesicle are very rare than the malignant neoplasms. we have successfully treated one such case of cystadenoma of the seminal vesicle. **Case Report:** Herein, we report a case of a cystadenoma in a 59-year-old man, detected in a routine ultrasonography for dull aching lower abdominal pain. The digital rectal examination detected a large mass anterior to rectum and posterior to bladder. Magnetic resonance imaging showed a normal prostate and a 5.7 x 4.5 cm cystic tumor, replacing the left seminal vesicle. Patient underwent an exploratory laparotomy and a direct approach to retrovesical space was chosen, tumor was totally dissected and removed. The gross appearance and microscopic aspect was compatible with cystadenoma of seminal vesicle. Patient's postoperative recovery was satisfactory, and there was no evidence of recurrence on both clinically and radiologically 3 months after surgery. **Discussion:** Although secondary involvement of the seminal vesicles by prostate cancer is relatively common, the primary seminal vesicle is an unusual site for neoplastic disease. True benign primary tumors are even rarer than malignant neoplasms, and include cystadenomas of the seminal vesicle. **Conclusion:** There is no large experience on management of these neoplasms. Marsupialization and aspiration are not indicated due to their multilocular organization. Because fine needle aspiration biopsies may be inconclusive, an exploratory laparotomy is usually needed. We have successfully managed one such case with no recurrence till date.

UMP 03 – 31

Leiomyosarcoma of epididymis: A rare case report

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Introduction and Objective: Leiomyosarcoma of epididymis is a rare occurrence. Only few cases have been reported in the literature. But they are the most common histopathological types of sarcoma arising from the epididymis. Early diagnostics of this tumor have proven to be of good prognosis as many studies have showed. The tumor usually presents as a painless, slow-growing scrotal mass in. Surgical resection of the tumor associated with adjuvant chemotherapy seems efficient in its treatment. This case is being reported as it is a rare presentation. **Methods:** We report a case of a 70-year-old man who was diagnosed of leiomyosarcoma of the epididymis treated by excision of the mass followed by chemotherapy. **Results:** Patient underwent high inguinal orchiectomy as we suspected a testicular malignancy preoperatively. The immunohistochemistry showed tumor cells to be positive for smooth muscle actin (SMA) and desmin (Des) and negative for cytokeratin (CK), HMB 45, CD117 (C-kit), and CD34. Histopathology report was suggestive of leiomyosarcoma of epididymis. Testis was free of tumor involvement. **Conclusion:** The epididymis represents a rare location for leiomyosarcoma although its histological characteristics are the same as that found in other organs. Information from the literature shows that radical orchiectomy seems to be the underlying treatment for this tumor. There is no proven efficacy for any adjuvant therapy. Leiomyosarcoma is an important differential diagnosis for paratesticular masses in the elderly male. The primary management is radical inguinal orchiectomy with high ligation of the spermatic cord and subsequent long-term follow-up.

UMP 03 – 32

Small round cell tumor of adrenal gland: A diagnostic dilemma

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Introduction and Objective: Malignant small round cell tumors (MSRCT) is a term used for tumors composed of small round relatively undifferentiated cells. It is a rare tumor with incidence of 0.2-0.5 cases/million population. Differential diagnoses include Ewing's sarcoma, Rhabdomyosarcoma, Non-Hodgkin's lymphoma, Neuroblastoma. **Methods:** A 25 yr old female patient presented with pain abdomen right flank. Pain was dull aching. No history s/o of functioning cortical lesions. No H/O HTn, headache or palpitations. Clinical examination unremarkable. **USG:** 41 x 38 mm lesion in the right adrenal gland. **CT scan:** heterogeneous enhancing solid mass in right adrenal gland of 50.7 x 38.5 mm with obliteration of normal contour. Areas of fat density seen within the lesion. **F/S/O Myelolipoma.** Metabolic screen of Plasma free metanephrines was done which was normal (30.2 pg/ml). **Lap adrenalectomy done.** **Results:** HPR showed - Diffuse infiltration by large lymphoid cells and plasmacytoid cells. Numerous hyperchromatic, neoplastic cells in the background along with many multinucleated tumor giant cells. **F/S/O Malignant Small round cell tumor.** Differential diagnosis: 1: NHL, 2: Poorly differentiated Neuroblastoma. Slide review was done which revealed the same diagnosis. IHC was done which revealed CD 20-CD 3: lymphoid component, CD 99: Negative {Ewings ruled out}, MPO: Highlights myeloid component of lesion, Synaptophysin: Negative {neuroblastoma ruled out}. **Diagnosis of Adrenal myelolipoma** was given. **Conclusion:** Lesions >4 cm and symptomatic lesions are indication for surgery. HPR may confuse with small round cell tumors and IHC is helpful in narrowing the diagnosis.

UMP 03 – 33

Role of positron emission tomography in distinguishing bland thrombus from tumor thrombus in a case of recurrent RCC

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Introduction: Solid organ malignancy is associated with venous thromboembolism due to variable effects on the Virchow's triad in malignancy. However the presence of concomitant tumor thrombus is a rare complication seen in solid organ malignancy especially in RCC causing the diagnostic dilemma. With the advent of functional imaging studies like FDG PET the differentiation between the two entities can be made. We report the case of local recurrence of renal cell carcinoma following radical nephrectomy associated with IVC thrombus constituting tumor as well as bland thrombus diagnosed with functional imaging. **Methods:** A 70 year old gentleman, follow up case of right papillary RCC, post radical nephrectomy presented 7 years after primary surgery with vague abdominal pain, dyspepsia, persisted fatigue and weakness. Examination revealed pallor, pedal edema and hepatomegaly with right grade II non reducible varicocele. **CECT abdomen** showed hepatomegaly, thrombosed portal and splenic veins with multiple collaterals. A 6.8 x 5.3 x 8 cm mass in right suprarenal location and IVC thrombus extending from cavo atrial junction to infrarenal IVC upto bilateral common iliac and proximal external iliac veins. **PET CT** showed FDG avid (SUVmax 21.5) heterogeneously enhancing right suprarenal soft tissue mass with intense tracer uptake (SUVmax 28.7) in IVC from suprarenal IVC to cavoatrial junction with extension in right atria and no uptake in infrarenal IVC thrombus. **Results** PET CT accurately differentiated bland thrombus from tumor thrombus. **Conclusion:** PET CT is a useful modality in cases with diagnostic dilemma in differentiating between the tumor thrombus from bland

UMP 03 – 34

Synchronous primary renal cell carcinoma with a primary ovarian carcinoma: A rare case report

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Objectives: Renal cell carcinoma (RCC) is known to metastasize to lungs, bone and liver by lymphatic and hematogenous routes, ovarian metastasis is theorized due to hematogenous dissemination or retrograde venous emboli. Prevalence of RCC is common in elderly age group with less probability of metastasis to ovary due to age related fibrosis. We hereby report a rare case of a double primary where a patient reported with a Right RCC and a left

ovarian mass which was found to be a serous papillary cystadenocarcinoma of the ovary. **Materials and Methods:** A 54 yr. post-menopausal female presented with right flank pain and hematuria. A CECT of the abdomen showed an 11 x 10 x 8 cm mass arising from lower pole of right kidney with a left adnexal mass of 6 x 5 x 6 cm. The CA-125 was normal. With possibility of an ovarian metastasis from primary RCC the patient underwent a right radical nephrectomy with a frozen section of left salpingo oophorectomy specimen which was reported as malignant. A right Salpingo oophorectomy with hysterectomy and omentectomy was performed for completion. The final Histopathology report was of a Right clear cell RCC, T2, Furhmanns 2 and a Left Serous papillary cystadenocarcinoma of the ovary. **Conclusions:** RCC with a synchronous primary ovarian tumour is rare, coexistence of these two primary tumours are rarely reported in literature and any adnexal mass in presence of a RCC shouldn't be concluded as metastasis esp. in post-menopausal patients. More studies are needed to substantiate the genetic and etiologic basis of these separate entities.

UMP 03 – 35

Hemangiopericytoma: Urologist nightmare (case series)

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Introduction and Objective: Hemangiopericytoma is a very rare neoplasm of the pericytes, of capillaries. Especially haemangiopericytoma of prostate is a relatively rare entity, characterized by uncontrolled proliferation of pericytes of prostatic blood vessels. Being represented only by 2% to 3% of all soft tissue sarcomas in humans, they usually occur in 4th and 5th decades of life. Aggressive surgical management followed by adjuvant chemo-radiation has been proven to be treatment of choice. Worldwide only very few cases have been reported. **Methods:** Here-in, we report 2 cases of primary haemangiopericytoma of prostate (over a period of 10 years), presenting itself like benign prostatic disease initially, resulting in acute retention of urine. In both cases Serum Prostate Specific Antigen (S.PSA) and CEA were found to be normal. Hence both patients underwent trans-urethral resection of prostate, but histopathology with IHC turned out to be primary hemangiopericytoma of prostate. Further evaluation with CT and MRI showed large heterogenous masses in the pelvis, with bladder involvement. Prostatic tissue were not separately made out. One patient underwent aggressive radical surgery alone, was asymptomatic for 36 months, later developed local recurrence and succumbed to the disease. Other patient underwent aggressive radical surgery followed by adjuvant chemo-RT. On follow-up, patient is doing well without any recurrence or distant metastasis. **Conclusion:** To conclude aggressive surgical management with adjuvant chemo-RT for haemangiopericytoma of prostate, followed by good follow-up is an effective and viable treatment.

UMP 03 – 36

Penile lymphoma presenting as penile ulcer

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Introduction: The most common type of penile malignant tumor is squamous cell carcinoma. Primary penile malignant lymphomas occurs very rarely, in most cases represent secondary involvement due to lymphatic or hematogenous spread or direct infiltration. The first case of primary malignant lymphoma of the penis was reported in 1962. To the best of our knowledge only 48 cases have been reported in the medical literature. The diagnosis is difficult due to its rarity, treatment modalities controversial due to limited cases. **Case Report:** We report a 52 yr male who presented with swelling of the glans penis with sloughed out ulcer and burning micturition. Local examination revealed a tender, swollen glans with 2 x 1 cm ulcer near the meatus. Blood investigations, USG and CT abdomen were normal. Biopsy of the lesion revealed atypical lymphoid proliferation. Patient underwent partial penectomy, HPE revealed Non Hodgkins lymphoma T cell type. Patient was started on chemotherapy and is on regular follow up for the past 7 months. **Discussion:** Common manifestations include painless mass or ulcer in corpus cavernosum, glans penis, penile skin plaques, nodules or diffuse penile swelling with ulceration. Rare symptoms include priapism, phimosis, testicular enlargement. A major differential diagnostic challenge is secondary lymphoma. While systemic chemotherapy is the treatment of choice for secondary lymphoma, treatment guidelines are difficult to establish in primary penile lymphoma. Recommendations include surgery, chemotherapy, local radiotherapy or combined modalities.

Recent developments in immunology has focused on biotherapy as a component of comprehensive treatment. A high index of suspicion is required for correct diagnosis and appropriate treatment.

UNMODERATED POSTER SESSION - IV

UMP 04 – 01

Primary malignant melanoma of urethra: Clinicopathological analysis of 2 cases

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Introduction: Malignant melanoma of genitourinary region is rare, comprising less than 1% of penile malignant melanoma and 0.2% of female urethral malignant melanoma. We present case reports of malignant melanoma of glans penis and urethra in 59-year old man and of urethra in 64-year female. **Materials and Methods:** 1. A 59-year-old man presented with blackish fungating growth over the glans penis and difficulty in micturition. There was no regional lymphadenopathy. Punch biopsy reported as malignant melanoma. Whole-body PET-CT scan showed no evidence of distant metastasis. Lymphoscintigraphy and SPECT showed three active inguinal lymph nodes. Total penectomy and left sided senti-nel biopsy with perineal urethrostomy was done. All three superficial inguinal lymph nodes were negative for malignancy. Histopathology confirmed the diagnosis of malignant melanoma. 2. A 64-year female presented with painless hematuria and splitting of urinary stream. She had history of excision of urethral lesion which was reported as malignant melanoma. Computed tomography showed bilateral inguinal lymphadenopathy. She underwent Radical Cystectomy with ileal conduit with bilateral pelvic lymph node dissection. Histopathological report was poorly differentiated neoplasm with intranuclear pigmentation. Immunohistochemistry was positive for HMB-45. **Results:** Malignant melanoma of the female urethra metastasize at early stage therefore requires early extensive excision while controversy lies with the extent of surgery for localized disease for melanoma of the glans penis and urethra. Sentinel lymph node biopsy plays important role. **Conclusion:** Due to the paucity of cases and absence of standard guidelines for treatment each case requires evaluation and tailoring of treatment.

UMP 04 – 02

Bacille-Calmette-Guerin induced balanoposthitis: A preventable complication

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Introduction: Intravesical Bacille-Calmette-Guerin (BCG) is used for reducing recurrence and progression in high-grade non-invasive urothelial carcinoma. Cutaneous complications like balanoposthitis are rare and there is no consensus on optimal management. **Material and Methods:** We present the case of a 60-year-old male patient who developed balanoposthitis and left inguinal lymphadenopathy just before the second cycle of BCG induction therapy. We also review the literature on management of this complication. **Results:** 60-year-old male patient, undergoing induction phase of intravesical BCG noticed erythema and induration of glans with purulent discharge and enlargement of left inguinal lymph nodes just before the second cycle of intravesical BCG. In retrospect, the patient had noticed a minor abrasion of the glans after removal of catheter in his first cycle. FNAC of the lymph node revealed live acid-fast bacilli. A dorsal slit was done, as the patient was not able to pass urine. After reviewing the literature, triple drug antitubercular therapy was given for 6 months. The lesion regressed with scar formation in 6 months. **Discussion:** BCG induced balanoposthitis is potentially morbid and requires a high index of suspicion. An FNAC of the lymph nodes may reveal acid-fast bacilli. If the diagnosis is uncertain, a biopsy of the penile lesion may be done. The intravesical BCG regimen needs to be stopped. Longer duration of antitubercular therapy has been shown to have better cosmetic outcome. Pyrazinamide has no role for Mycobacterium bovis. BCG should be given after at least 2 weeks of TURBT. In case of abrasion or traumatic catheterization, it should be delayed.

UMP 04 – 03**Perivascular epithelioid cell neoplasm: Histological surprise in a bladder tumour****Kumar BN, Kumar BN, Karan SC, Srivastava A, Talwar R**

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Introduction: Perivascular epithelioid cell tumours (PEComas) are a group of mesenchymal tumors which may be benign or malignant with histologically and immunohistochemically distinctive perivascular epithelioid cells. Bonetti et al first described them in 1994 and the term 'PEComa' was introduced by Zamboni et al in 1996. PEComas most commonly affect uterus and retroperitoneum. Only 15 cases of PEComa of urinary bladder (UB) have been reported and we present another such case. **Materials and Methods:** A 44 years old male had presented with non-specific pain abdomen. He was incidentally detected to have a contracted right kidney and a 2.6 x 2.8 x 3.2 cm lobulated hypoechoic lesion on right lateral wall of UB on ultrasonography. The mass showed enhancement on post-contrast images on computerized tomography. Cystoscopy revealed a smooth tumour with intact overlying mucosa on right lateral wall of UB and biopsy revealed a low grade mesenchymal tumour with epithelioid morphology and the tumour cells were positive for vimentin, smooth muscle actin (SMA) and human melanoma black 45 (HMB45), favouring a diagnosis of PEComa. **Results:** Patient underwent partial cystectomy after ruling out metastases. Histopathology confirmed the diagnosis of low risk PEComa with positive superior margins. The patient is on follow-up with no recurrence after 7 months of surgery. **Conclusion:** PEComa is an extremely rare bladder tumour that usually occurs in middle aged patients. It has an indolent behaviour mostly. Preferred treatment is complete excision and the role of adjuvant treatment is not yet defined. Long term follow-up studies with large number of cases are needed.

UMP 04 – 04**Urachal adenocarcinoma: A rare case report****Lalith Sagar Kadiyala, Siva Sankar, Sankar G, Srikanth, Vijay Bhaskar, Mohan Raju, Surya Prakash V**

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Introduction: Urachal carcinoma is rare and comprises 0.35 to 0.7% of all bladder cancers and 22-35% of bladder adenocarcinomas. Urachal tumors often presents at an advanced stage and has a dismal prognosis. We present a case of 55 year male patient with urachal malignancy managed with radical cystoprostatectomy and orthotopic ileal neobladder and adjuvant chemotherapy. **Case Report:** A 55 year old male patient presented with haematuria to Urology outpatient department. The CECT abdomen and pelvis showed a Well defined heterogeneously enhancing mixed cystic and solid lesion of size 6.2 x 3.9 x 4.9 cm in the mid line arising from the anterior superior wall of urinary bladder extending anteriorly to abdominal wall with punctate calcification and urinary bladder wall thickening - Adenocarcinoma of Urachal remnant. A transurethral biopsy of the mass confirmed urachal adenocarcinoma with signet ring cell differentiation. Patient underwent Radical Cystoprostatectomy with resection of the urachus including the umbilicus and orthotopic ileal neobladder is done. Margins were negative and the tumour involved the full thickness of the bladder wall, extended to the perivesical fat and serosal surfaces, with lymphovascular invasion and 2 of 7 pelvic lymph nodes positive. He was given adjuvant 5Fu Uracil and Doxorubicin chemotherapy and is free of recurrences 10 months after surgery. **Conclusion:** The only effective therapeutic approach for urachal adenocarcinomas is surgical eradication with wide pelvic dissection, response to radiotherapy and chemotherapy is modest. The poor prognosis associated with urachal carcinoma is due to a high frequency of locally advanced disease at presentation.

UMP 04 – 05**Gaint fibroepithelial polyp occupying pelvicalyceal system arising from superior calyx****Luqman Ahammed P, Aby Madan, Tony Thomas John, Nazam M**

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Introduction: Renal fibroepithelial polyps (FEP) are rare benign lesions of renal collecting system and mimics urothelial carcinoma of pelvis. Because

of its rarity FEP and its resemblance with upper tract TCC it is usually misdiagnosed clinically and are treated with morbid surgery like radical nephroureterectomy (RNU). **Case Report:** A 50 year old lady presented with right loin pain for 1 month. On evaluation CECT showed large filling defect, filling pelvicalyceal system with minimal postcontrast enhancement. RGP and diagnostic ureteroscopy showed a smooth rounded polypoidal mass lesion filling the pelvis and upper ureter. A biopsy was taken with 8 f semi-rigid ureteroscope which clinched the diagnosis of Fibro-epithelial polyp. Patient underwent radical nephrectomy. Lesion was arising from the superior calyx filling the entire pelvis and extending into the ureter. The mass had 3 stalks – one each in the ureter, pelvis and superior calyx. Histopathological examination confirmed the diagnosis. There was no evidence of malignancy. **Discussion:** Renal fibroepithelial polyps are rare lesions of renal collecting system and mimics urothelial carcinoma of pelvis. A localized lesion can be subjected to minimally invasive nephron sparing surgery like PCN and resection, or ureteroscopic resection and a prior endoscopic biopsy is very helpful in obviating a radical surgery. **Conclusion:** Ureteroscopy and biopsy may be useful to differentiate FEP from TCC upper tract, especially when the diagnosis is in doubt.

UMP 04 – 06**Primary testicular leiomyosarcoma: A rare case report****Mikir Patel, Pawan Vasudeva, Anup Kumar, Harbinder Singh, Gaurav Kumar, Niraj Kumar**

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Introduction: Leiomyosarcoma is malignant soft tissue tumor arising from undifferentiated smooth muscle cells of mesenchymal origin. leiomyosarcoma of scrotum have been classified into para-testicular and intra-testicular, latter being very rare. Primary intra-testicular leiomyosarcoma believed to arise from smooth muscle elements of testis such as blood vessels or contractile cells of seminiferous tubules. Only few cases have been reported in literature. We are presenting one of the rare case of left testicular leiomyosarcoma with retroperitoneal mass and metastasis to para-aortic and retro-caval lymphnodes. **Methods:** A 17 year old male presented with left scrotal mass and left side abdominal lump for 6 months. On examination there was 7 x 4 cm left scrotal mass and 15 x 11 cm left side large abdominal lump. The X-ray chest was normal. An ultrasonography and CT scan showed a heterogenous solid testicular mass with hypoechoic and hyperechoic components and huge retroperitoneal lymphadenopathy abutting major vessels. Tumour markers including Lactate dehydrogenase (LDH), alpha-fetoprotein (AFP) and beta-human chorionic gonadotrophin (β-HCG) were within normal limits. The patient underwent left radical orchidectomy followed by chemotherapy. The histopathological examination confirmed leiomyosarcoma with immuno histochemistry was positive for smooth muscle actin and vimentin. **Results and Conclusion:** As only few cases have been reported so far, clinical and biological behavior of this tumor difficult to predict. Leiomyosarcoma should be one of the differential diagnosis of seronegative testicular mass. Based on a review of literature, the treatment for an intratesticular leiomyosarcoma is a radical orchidectomy and surveillance followed by radiological examination in cases at stage I. There are no available data regarding the management of stage II or Stage III disease after radical orchidectomy, hence standard therapy is difficult to recommend.

UMP 04 – 07**Bellini duct carcinoma: A rare entity****Mishra Amit Kumar, Manikandan R, Dorairajan LN, Sreerag KS, Mittal Jayesh, Kumar Santosh**

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Introduction and Objective: Bellini duct carcinoma of kidney derives from collecting duct and is associated with an aggressive course and extremely poor prognosis. Till date less than 100 cases have been reported. Here we report an interesting case of collecting duct carcinoma with inferior vena cava (IVC) thrombus and large retroperitoneal lymph nodes. **Patients and Methods:** A 67 years old male presented with gradual weight loss and decreased appetite since last 6 months and left flank pain since last 10 days. Clinical examination and renal functions were normal. CECT Abdomen revealed “ heterogenous enhancing mass 5 ×4×6 cm in the

midpole of left kidney, infradiaphragmatic IVC thrombus and multiple regional lymph nodes largest measuring 4x4 cm", so a clinical diagnosis of renal cell carcinoma was made. Left open radical Nephrectomy with IVC thrombectomy and regional lymphadenectomy was performed and specimen sent for Histopathological examination. Based on morphological and immunohistochemical analysis, diagnosis of collecting duct carcinoma was made. Results: Postoperatively the patient had prolonged paralytic ileus and required insertion of percutaneous drain for left retroperitoneal collection, which was removed after 2 weeks. Presently patient is on adjuvant chemotherapy with gemcitabine and cisplatin and doing well. Conclusion: Rarity of this tumour favours documentation in literature. It is aggressive, presents symptomatically at an advanced stage so there is need for a standardized approach in the management to limit treatment delay after surgery, and thereby improve survival. Targeted therapies may play a role in selected cases.

UMP 04 – 08

Leukemoid reaction in a case of advanced penile cancer: A rare entity

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Introduction and Objective: Leukemoid reaction is defined as persistent neutrophil count greater than 30-50x10³ cells/ μ L. It can be a feature of various benign conditions like burns, infections, allergies and uncommonly in few malignancies. In leukemoid reaction, the neutrophils are mature and not clonally derived. We report here a case of leukemoid reaction in a patient with Advanced penile cancer. **Patients and Methods:** A 60 years old male with partial penectomy status for squamous cell carcinoma of penis on neoadjuvant chemotherapy presented with left fungating inguinal lymph nodes. He presented with progressively increasing total leucocyte count. He had neutrophil counts 96 x10³ cells/ μ L and hypercalcemia. Leucocyte Alkaline Phosphatase (LAP) score was excessively elevated. **Results:** Pt underwent bilateral ilio-inguinal block dissection with anterolateral thigh flap cover of the left inguinal surgical defect by plastic surgery team. Post-operatively, the neutrophil counts and serum calcium normalized. Patient improved and was discharged after 3 weeks but after that he was lost to followup. **Conclusion:** Leukemoid reaction is an indicator of aggressive nature of malignancy and portends poor prognosis. LAP score is elevated in leukemoid reaction and helps in differentiating it from acute leukemia. Treatment of the primary disease generally leads to resolution of leukemoid reaction. To the best of our knowledge, this is the first case of penile cancer with leukemoid reaction in published studies.

UMP 04 – 09

Management of malignant recurrent Pheochromocytoma in paediatric patient: A rare case

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Introduction: The recurrence rate of Pheochromocytoma is said to be 6-17%, but there are only a few reports on the management of bed recurrence with multiple lymph node metastasis. We report a rare presentation of recurrent pheochromocytoma accompanied by extensive lymph node metastasis following left adrenalectomy for suspected benign pheochromocytoma about eight years ago. **Case Report:** A 16 year boy underwent an left adrenalectomy for benign pheochromocytoma in 2004. The patient presented eight years later with accelerated hypertension and diminished vision. MR imaging documented tumor recurrence in the left adrenal bed and hilar and parahilar lymph nodes, with avid uptake observed in the same sites by 131I-MIBG scintigraphy. Plasma free metanephrine was elevated. VHL was ruled out. Excision of the tumor and retroperitoneal lymphadenectomy was performed. Histopathology reported as pheochromocytoma of the adrenal bed recurrence with extensive metastasis in the resected lymph nodes. His clinical course is being followed with no signs of recurrence till the date. **Conclusion:** Tumour development and recurrence rates are low after initial surgery after adrenalectomy

for pheochromocytoma. Regular clinical and biochemical follow up is advocated, as tumour occurrence may occur long after the initial surgery in cases of malignant pheochromocytoma. The role of surgery is essential to achieve long-term survival because it provides clinical and functional control of the disease and prolong survival.

UMP 04 – 10

Inguinal hernia mesh migration: A diagnostic dilemma

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Repair of inguinal hernia is the most commonly performed surgical procedure. Despite the benefits of using surgical meshes to repair abdominal and inguinal hernias, there are reports of mesh migration into the gastrointestinal and urinary tracts, a complication that cannot be overlooked or neglected. Migration of mesh into urinary bladder and mimicking bladder malignancy is a rare occurrence, with only a few cases reported in the literature. We report a case of a 50 year old male with a history of open right hernia repair and referred to us for suspected bladder malignancy. Imaging studies showed an abdominal mass arising from the wall of the urinary bladder. On cystoscopy, bullous erythematous lesion measuring 3x 3 cm seen on right superolateral wall of the bladder. On exploration it was found that migration of a mesh was mimicking the urological disease initially suspected.

UMP 04 – 11

Sarcomatoid variant of transitional cell carcinoma of renal pelvis: A rare and devastating malignancy

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Sarcomatoid carcinoma of transitional cell origin is an extremely rare malignancy with less than 15 cases reported in literature till date. The prognosis is dismal as per previously reported cases with most patients succumbing to the disease within 2 years. Due to the rarity of the disease there are no standard treatment protocols. We report a 43 year old lady, who presented with history of painless hematuria of 4 months duration, associated with passage of vermiform clots. Physical examination was unremarkable. Urine analysis showed 5-6 RBC/HPF and cytology was negative. Patient was evaluated with a CT scan, which showed a heterogeneous mass occupying the right renal pelvis measuring 10 * 6 centimeter. Patient underwent laparoscopic right nephroureterectomy after metastatic work up. Histologically, the tumor showed transitional cell carcinoma with sarcoma like areas consisting of prominent spindle cells. Immunohistochemistry was positive for cytokeratin. Patient was placed on a strict follow up regime of cystoscopy and ultrasound. Six months post surgery patient presented with pain abdomen and was evaluated. Ultrasound revealed a mass in the right renal fossa which was further characterized by CT scan. Patient was subsequently started on gemcitabine-based chemotherapy. We herein present the management of this case along with review of literature

UMP 04 – 12

Carcinoma penis in a case of down's syndrome: A rare case report

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Down's syndrome (Trisomy 21) is one of the first symptom complexes associated with mental retardation to be identified as a syndrome. Individuals with Down's Syndrome have been associated with multiple organ-system abnormalities like congenital cardiac problems (ASD, VSD, PDA), Gastro-intestinal abnormalities, Ophthalmological features, Ear abnormalities, Dysfunctional immune system, Infertility, Thyroid abnormalities, Seizure disorders etc. Pattern of malignancies in Down's Syndrome are unique, as children with DS have 10-20 fold higher risk for

developing ALL & AML, although they do not have uniformly increased risk of developing solid tumors. Several types of solid tumors including lymphomas, retinoblastoma & testicular germ cell tumors have been reported to occur in Down's Syndrome individuals. Among Down's Syndrome adults carcinomas reported to occur less frequently than in general population. Here we report a rare case of Carcinoma Penis in a 31 yr old male Down's syndrome patient. Patient presented with difficulty in voiding due to a growth at distal penile shaft. On examination a hard ulcero-proliferative growth involving prepuce & glans, approx 3 x 3 cm in size, was seen. Biopsy was done which was reported as Squamous cell carcinoma. We didn't find any case report in literature showing carcinoma penis in Down's Syndrome patients which suggest rarity of occurrence of these two clinical conditions together.

UMP 04 – 13

Rare case of desmoplastic small round cell tumor of kidney in young female: A case report

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Introduction: Desmoplastic small round cell tumor (DSRCT) is a rare malignant tumor that generally manifests as abdominal paraserous masses and affects mainly male adolescents and young adults. We present a rare case of DSRCT in young female. **Materials and Methods:** A 35-year-old female was presented to our OPD with complaints of dull aching pain left flank for 3 months with moderate grade fever associated with chills for 8 days, on examination renal lump was present. Laboratory examinations revealed anemia with leucocytosis. Initial abdominal ultrasound revealed a left kidney enlarged and replaced by two complex cystic mass. CT Scan shows 11.3 x 10.2 x 20 cm mass arising from upper and mid pole of left kidney with multiple areas of necrosis and foci of calcifications present. Multiple pre and para aortic lymph nodes were enlarged, largest size 12 mm. There were no signs of extracapsular extension, metastasis, or renal vein involvement. **Results:** An open left radical nephrectomy was performed. Microscopic examination showed a tumor involving the cortex, medulla and sinus, and composed of small round undifferentiated cells with extensive areas of necrosis, and an epithelial component suggestive of DSRCT. There was no evidence of extracapsular extension and lymphovascular invasion. On immunohistochemical staining CD 99 was focally positive in tumor and CD 10 was negative. **Conclusion:** DSRCT should be considered in the differential diagnosis of renal tumors composed of small round cells. Ancillary studies such as immunohistochemistry may suggest the diagnosis.

UMP 04 – 14

Renal cell carcinoma with IVC thrombus extending up to Right Atrium and triple vessel coronary artery disease

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Introduction: Standard treatment of patients with coexisting cardiac and non-cardiac diseases includes two separate operations. Till now there have been just few publications on one-stage cardio-urologic operations and there are no reports concerning patients with combined coronary artery bypass surgery and urologic tumor. **Materials and Methods:** Seventy two years old man, presented to our tertiary care centre with a diagnosis of right renal mass lesion extending into renal vein, Inferior vena cava (IVC), up to right atrium (RA). A cardiac evaluation was done in the form of Coronary Angiography and triple vessel coronary re obstruction was diagnosed. He was advised a myocardial revascularization procedure in the form of Coronary Artery Bypass Grafting (CABG). After discussion with the patient and his family, single stage operation was decided and carefully planned. Under intubated general anesthesia, through anterior midline abdominal incision, transperitoneal approach, reteroperitoneum was entered. The right renal artery was ligated in continuity at its origin and the left renal vein was secured in a vascular loop. A loop was placed around the IVC below the renal vessels. At this stage, through a median sternotomy, CABG was carried out on beating heart. Following this, the patient was brought under heart lung bypass machine with hypo thermia. At this stage a racquet shaped incision was made on the IVC, encircling the right renal vein. The thrombus

was meticulously pulled out of the IVC in its entire length. After an initial resistance, the thrombus came out as a single piece in continuity with the kidney specimen. The radical nephrectomy was completed by dividing the renal artery and excising the kidney in extra fascial plane. Incisions were closed with after careful homeostasis over an abdominal and a thoracic drain. **Results:** The operation took 4 hours 25 minutes. Blood loss was 600 ml. 5 units of fresh frozen plasma (5 x 220 ml), 2 units of red blood cells (2 x 500 ml) and 1 unit of platelets were administered. **Conclusion:** To the best of our knowledge, this is the first reported case of patient, who underwent one-stage radical nephrectomy with thrombectomy with CABG. The aim of this report was to prove the possibility of simultaneous difficult cardiac and urologic operation. One-stage cardiac and uro-oncologic operation can be a safe and beneficial procedure, if performed in selected patients by experienced cardio-surgical and urological teams.

UMP 04 – 15

Non-Hodgkin's lymphoma of adrenal presenting as a adrenal mass: A rare entity

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Introduction: Adrenal involvement in disseminated lymphoma is rare presentation. Localised/Primary involvement of adrenal for lymphoma is even rare. We are presenting a case of primary Non-hodgkin's lymphoma of adrenal gland. **Case Report:** A 48 year old diabetic lady presented with right upper abdominal discomfort. On evaluation, she was found to have hepato-splenomegaly with right adrenal mass lesion. Further evaluation revealed approximately 5 x 4 x 3.5 cm right adrenal mass on CT scan. Her clinical examination was normal & biochemical evaluation was within normal values. She underwent right laparoscopic adrenalectomy without any peri-operative complications. Her histopathology report revealed Non hodgkin's lymphoma-high grade. **Discussion:** Primary adrenal Non-Hodgkin's lymphoma is rare. The symptoms of the disease and response to treatment are variable depending on the type of lymphoma, tumor size, and presence of adrenal insufficiency.

UMP 04 – 16

Inflammatory myofibroblastic pseudotumor of kidney mimicking as renal carcinoma: Case report and review of literature

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Case Report: A 38-year-old male patient presented with the complaints of the left flank pain since 1 year. There was no history of hematuria. General physical and urological examinations were unremarkable. Urine microscopy was within normal limits. Abdominal ultrasonography revealed biloculated cystic lesion with low level internal echoes in left kidney with mild hydronephrosis. Contrast-enhanced computed tomography (CECT) abdominopelvic region demonstrated a large 11 x 8 x 7 cm heterogeneously enhancing lobulated soft tissue lesion at hilum of left kidney with encasement of renal vessels. Lesion extends along left ureter upto iliac vessel bifurcation. Fat planes with aorta obliterated with possibility of a malignant tumor (renal lymphoma or transitional cell carcinoma of ureter). USG guided trucut biopsy was done, biopsy report was suggestive of low grade renal sarcoma. MRI abdomen showed an ill defined heterogeneously enhancing altered signal intensity lesion measuring approximately 7.5 x 7 x 11 cm in retroperitoneum on left side involving anterior and posterior paranephric space and perinephric space with renal parenchymal involvement. There is encasement of renal vessels and ureter causing hydronephrosis, fat planes with aorta lost. Left radical nephrectomy was performed with a diagnosis of renal cell carcinoma. The intraoperative findings correlated with the radiological finding. The patient remained pain free during outpatient clinic follow-up. Grossly the left kidney showed an irregular, invasive grey white growth and microscopy revealed benign tumor comprising of numerous interlacing fascicles of benign spindle cells, infiltrated by dense inflammatory cells comprised of plasma cells, eosinophils and lymphocytes. Immunohistochemical studies demonstrated strong positivity smooth

muscle actin (SMA), Negative S100 and CD117 Conclusions:-Primary renal inflammatory myofibroblastic tumor is an extremely rare neoplasm of uncertain biological potential. The preoperative diagnosis of IMT remains difficult, despite progress in medical imaging and often requires surgical exploration. The diagnosis is based on a correlation of radiological and histological findings. Typically, the IMT is characterized by the expression of vimentin, smooth muscle actin and cytokeratins. There are some predictors for aggressive behavior and metastatic potential of IMT, which include presence of ganglion like cells, cellular atypia, aneuploidy and p53 overexpression. Surgery remains the main stay of treatment

UMP 04 – 17

Painless gross hematuria with clot retention: first manifestation of tuberous sclerosis complex

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Introduction and Objective: Tuberous sclerosis complex (TSC) is a genetically determined multisystem disorder which involves skin, brain, heart, kidneys and lungs most frequently. Most common renal manifestation of TSC are angiomyolipomas which show more frequent bilaterality, occur at younger age and are more often symptomatic than their sporadic counterparts. Most frequent presentation involves either nervous system or skin. Renal angiomyolipomas can cause flank pain, hematuria or life threatening retroperitoneal hemorrhage. We report a rare presentation of the disorder with painless gross hematuria in a middle aged male as the first clinical manifestation. **Methods:** the patient, a 45 year old male, presented to the emergency department with history of painless gross hematuria since 2 days followed by acute retention of urine. The distended bladder was apparent on examination while no renal mass was palpable on either side. The patient underwent ultrasonography of the abdomen which suggested left sided angiomyolipomas with hemorrhage with bladder clots for which cystoscopic clot evacuation & bladder irrigation was performed. On further evaluation with CT scan of the abdomen, bilateral angiomyolipomas with hemorrhage in left side was detected. CT of the brain revealed multiple sub-ependymal calcified nodules. The patient underwent left sided nephrectomy for intractable hemorrhage. **Result:** the patient made uneventful recovery and was discharged on POD 6. **Conclusion:** Tuberous sclerosis complex can have myriad presentation with gross hematuria & urinary retention as the first clinical manifestation. The disease and its natural history are still being investigated and case reports like this contribute to the ongoing effort.

UMP 04 – 18

The black mole that ate the manhood

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The black spots regarded as a sign of beauty at times can be devastating when malignancy occurs in them. Mucosal melanoma is an extremely rare malignancy that comprises less than 4% of all melanomas and accounts for less than 2% of all primary penile malignant lesions. Penile melanomas are usually diagnosed late; clinically, they may vary in presentation from macules to papules and nodules, of varying colour. Here we present 70 a year old male who presented with a penile lesion and diagnosed as melanoma.

UMP 04 – 19

Renal lymphoma: A case report

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Introduction: Renal lymphoma (RL) is a distinct pathological and clinical entity which is extremely rare, highly aggressive and rapidly disseminating from its origin. RL comprises less than 1% of all renal lesions. It has poor prognosis with median survival of less than a year. We present 64-year-old woman who underwent laparoscopic radical nephrectomy for the presumed diagnosis of renal cell carcinoma and histopathological diagnosis was Non hodgkins Renal lymphoma. Case

Report: A 64-yr-old woman presented with right loin pain. A CECT of abdomen & pelvis showed 3.5 X 4 cm heterogeneously enhancing mass in the Right kidney involving the upper pole. Left kidney & liver appears to be normal. With preoperative diagnosis of Renal cell carcinoma, she underwent Laparoscopic Right Radical nephrectomy. The histological diagnosis was non-Hodgkin lymphoma (NHL) of B-cell type with focal capsular invasion & 6 out of 15 lymph nodes involved. On Immuno histochemistry-LCA-diffusely positive & vimentin was negative. It was positive for CD3, CD5, bcl-2, CD10, CD19, CD20. PET-CT showed metabolically active lesions in spleen & osseous at Lt 5 th rib & Rt Iliac bone. Bone marrow biopsy showed hypo cellular marrow. She completed 6 cycles of R-CHOP Chemotherapy regimen. she had complete response to treatment and is free of recurrence 15 months after surgery. **Conclusion:** Renal lymphoma mimicking renal cell carcinoma, most patients undergo Radical nephrectomy. Renal biopsy is the diagnostic of PRL. Patients with atypical features suspicious of Renal lymphoma, therefore, should undergo a preoperative percutaneous renal biopsy. Making a preoperative diagnosis can avoid unnecessary nephrectomies in such cases. Early diagnosis combined with chemotherapy regimen and rituximab ((R-CHOP) could improve survival rates. Strict follow up is essential to determine the recurrence rate over time.

UMP 04-20

Primary renal rhabdomyosarcoma in an adult patient presenting with myasthenia gravis: Unusual presentation of a rare malignancy

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Introduction: Rhabdomyosarcoma is a tumour of mesenchymal origin and is common in children. Renal sarcomas account for only 1% of cases of renal malignancy. Here we present a case of renal rhabdomyosarcoma in an adult patient who presented with myasthenia gravis as a paraneoplastic syndrome. **Case Report:** A 30 year old male presented with history of drooping of eyelids and abdominal distention since one month. Per abdominal examination revealed a mass occupying right lumbar region. Ultrasonography showed a mass arising from right kidney. Contrast enhanced CT was suggestive of a mass lesion arising from lower pole of right kidney with heterogeneous enhancement and cystic areas. Neurologic evaluation revealed a decremental nerve response suggestive of neuromuscular junction disorder. Radical nephrectomy was done with careful perioperative use of acetylcholine esterase inhibitors. Histopathology showed highly pleomorphic cells with eosinophilic cytoplasm and bizarre strap cells. Immunohistochemistry for vimentin and myogenin was positive suggesting a myogenic origin of the tumour. **Conclusion:** Genitourinary rhabdomyosarcomas are common in children, most common sites being paratesticular region, bladder, prostate and female genitourinary tract. Renal sarcomas are as such rare tumours, most common being leiomyosarcoma arising from capsule or perinephric structures. Myasthenia gravis is rarely seen as a paraneoplastic syndrome in renal cell carcinomas. Hence, our case is an unusual presentation of a rare tumour. Radical nephrectomy is the treatment of choice and diagnosis is usually made after histopathologic examination. There is insufficient data and literature at present to recommend the use of adjuvant chemotherapy or radiotherapy in these patients.

UMP 04 – 21

Primary renal ewing's sarcoma/primitive neuroectodermal tumor of kidney

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Introduction and Objective: Primary renal ewings sarcoma has extremely rare occurrence. Only very few cases have been reported in the literature. The tumor usually presents with loin pain and localized renal mass in middle-aged men. Most of the tumors are diagnosed by light microscopy, immunohistochemistry, chromosomal analysis and fluorescence in situ hybridization (FISH). Surgical resection of the tumor associated with adjuvant chemotherapy and radiotherapy seems efficient in its

treatment. This case is being reported as it is a very rare presentation. Methods: We report a case of a 13-year-female who was diagnosed of Ewings sarcoma/PNET of the kidney with extension in to IVC treated by radical nephrectomy and IVC thrombectomy followed by chemotherapy. Results: Patient underwent radical nephrectomy and IVC thrombectomy. Light microscopy and immunohistochemistry of the specimen showed ewings sarcoma/PNET, which was confirmed with FISH showing EWSR1 rearrangement (ESWR1, 22q12). Post op chemotherapy was given with doxorubicin, vincristine, and cyclophosphamide alternated with ifosfamide and etoposide. Conclusion: Treatment strategies for renal EWS include surgery, chemotherapy, and radiotherapy. Current standard chemotherapy includes doxorubicin, vincristine, and cyclophosphamide alternated with ifosfamide and etoposide. Postoperative radiotherapy may be added when locoregional lymph nodes are enlarged. Patients with localized EWS have shown excellent survival. prognosis of patients with metastases is poor.

UMP 04 – 22

Prostate specific membrane antigen: Is it specific for prostate cancer?

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Introduction: Human prostate-specific membrane antigen (PSMA), a 100-kDa transmembrane glycoprotein, is a highly specific marker of the prostate gland, and is used as a marker of circulating prostatic epithelial cells. PSMA PET/CT is being evaluated as a specific technique for detection of metastatic prostate adenocarcinoma. Case Reports: Case 1: A 65 year old gentleman, diagnosed with prostate cancer on TURP, presented to us with sclerotic bone metastasis and a complex cystic lesion in the left kidney. PSMA PET/CT showed uptake in the prostate, bones and the renal lesion. He underwent Robotic NSS, and the pathology showed renal clear cell carcinoma of Fuhrman grade 1. Case 2: A 88 year old gentleman presented with LUTS and acute on chronic retention. Serum PSA was 9 ng/ml and ALP was normal. TRUS biopsy revealed small cell carcinoma of the prostate. Patient underwent PSMA PET/CT as a staging workup. PSMA PET/CT showed uptake in lung and mediastinal lymphnodes. FNAC of lung lesion revealed small cell carcinoma. Result Second synchronous malignancies in prostate cancer range from 4 to 8%. Differentiating metastasis from prostate and these malignancies is critical for management decisions. PSMA PET/CT is considered for these indications. Discussion/ Conclusion: This experience shows that PSMA is not specific for prostatic adenocarcinoma.

UMP 04 – 23

Synchronous bladder and bowel carcinoma: A rarity

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Introduction: Synchronous tumors occurring anywhere in the body are quite unusual. We present this case of bladder and bowel malignancies detected and treated together. Case Report: A 57 year old male patient presented with hematuria and was found to have a solitary bladder tumor. He also gave history of malena and was found to be passing tarry stool. Colonoscopy revealed two growths - one in the ascending and another in the transverse colon. Biopsy confirmed malignancy. Patient underwent TURBT and Laparoscopic Total Colectomy + Ileosigmoid anastomosis in one sitting and HPE revealed Low grade papillary TCC of bladder and moderately differentiated carcinoma of the ascending and descending colon. Patient has finished 6 cycles of intravesical BCG and is currently asymptomatic. Conclusion: Synchronous tumors with completely different pathologies are highly unusual. Based on HPE findings metastasis was ruled out and proved to be separate primary malignancies which makes our case extremely rare.

UMP 04 – 24

A rare case of leiomyosarcoma of the spermatic cord

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Introduction: Leiomyosarcomas of the spermatic cord are rare tumors of non-testicular origin and have been reported in less than 150 cases in the literature until now. Radical inguinal orchiectomy and high ligation of the cord is the standard primary surgical procedure in spermatic cord leiomyosarcoma. Materials and Methods: A 66 years old male, k/c/o hydrocele since 18 years came with complaints of increase in the size of scrotal swelling since last 18 months. On examination patient had a right side 4 x 6 cms hard swelling in the spermatic cord associated with a right hydrocele of 5 x 6 cms, the hydrocele was felt separately from the mass. Scrotal ultrasound showed a large hypoechoic oval tubular mass in the right cord, with Doppler demonstrating significant vascularity. MRI scrotum demonstrated a well defined multilobulated solid mass lesion in the region of the head of right epididymis with focal areas of necrosis without any infiltration into tunica. Left transinguinal radical orchidectomy and high ligation of the spermatic cord was performed. Definitive pathological diagnosis of this patient was the leiomyosarcoma of left spermatic cord, grade 1 and negative surgical margins. Due to no positive surgical margins, no lymphatic and distant metastasis, radiotherapy and chemotherapy was not recommended in this case. Conclusion: Leiomyosarcoma of the spermatic cord are rare malignant tumors and clinicians should consider them in differential diagnosis of a firm and hard solid mass in the cord. A large number of spermatic cord leiomyosarcoma are low-grade with good prognosis, long-term follow-up is needed to prevent recurrence and metastasis.

UMP 04 – 25

Primary closure of the bladder exostrophy in a neonate followed by bladder and ureteric calculi

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A 10 year of primary closure of bladder exostrophy at neonatal age now present with large urinary bladder stone and bilateral multiple ureteric calculi. Serum calcium, uric acid and pth level are within normal limits. IVP shows B/L normal functioning kidneys with grade - 3 hydronephrosis. Patient undergoes open cystoureterolithotomy and total stone clearance achieved.

UMP 04 – 26

Large solitary urethral calculus in a female

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Introduction and Objective: Urethral calculi are extremely rare and usually associated with stricture, cystocele or diverticula in female urethra. Such calculi may be single or multiple but are usually small. We present here a case of large primary urethral calculus in a middle aged female. Materials and Methods: Case History - A 40 years old female presented in out patient department of SP medical college with complaints of dysuria, difficulty in passing urine and hematuria for 4 yrs. There was no history of fever. General survey and abdominal examination were unremarkable. On per vaginal examination a hard mass was felt on the anterior aspect of vagina along urethra without cystocele suggestive of urethral malignancy. Plain xray KUB demonstrated a large calculus between the pubic bones. On ultrasonography the calculus was 6 x 4 cm in size. Cystography revealed that the calculus was completely within the urethra and was not associated with any diverticula. Intravenous urography revealed normal kidney and ureters and bladder. There was no meatal stenosis. cystoscopy was normal but for large urethral calculus. Patient was put in jack knife position and urethra was opened through anterior vaginal wall. Calculus was removed intact and reduction urethroplasty was done. Results: Post operatively patient fared well without incontinence at 6 months of follow up. Conclusion: Urethral calculus in female is uncommon because of short and wider urethra, we present here a large primary urethral calculus on account of its infrequent occurrence.

UMP 04 – 27

Serum testosterone: The association with urolithogenesis

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Introduction and Objective: The incidence of urolithiasis is twofold to threefold higher in men than in women. The association between testosterone and stone formation in humans, however, has not been well investigated. The aim of this study is to investigate the relationship between serum testosterone and stone formation. **Patients and Methods:** This study was conducted from Oct-2014 to June-2015 in our department. 40 male stone patients and 40 male stone free patients who were admitted for other problems (control) were included in our study. Both the groups were having no co-morbid condition. Morning total and free testosterone levels were recorded for all 80 patients. Stones obtained from these patients were also studied. Mann-Whitney-U test was used to examine the data. **Results:** Although the age differences between the two groups were not statistically significant, the stone formers compared with stone-free controls tended to have significantly higher serum levels of testosterone. The predominant stone found was calcium oxalate. **Conclusions:** The male stone formers were found to have higher serum total testosterone levels compared with a similar healthy man. Our findings warrant confirmation in a larger, prospective study. There are potential therapeutic implications if testosterone is found to be a risk factor in urolithogenesis.

UMP 04 – 28

Urine calcium citrate ratio and the risk of severe urolithiasis

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Kidney stone disease affects up to 5% of the population and a lifetime risk of 8-10% of passing a kidney stone. The aim of this study is to find out if it is possible to identify patients who are at a risk of developing severe lithiasis based on their urine calcium citrate ratio. In this study, severe lithogenesis was defined as unilateral kidney with single stone of size >2 cms, unilateral kidney with multiple stones with a cumulative size of >2 cms, bilateral synchronous kidney stones of size >2 cms or recurrent stones (more than 2 episodes of stones in one year or 3 episodes in 3 years irrespective of stone size). Data was collected from the metabolic stone clinic and analysed to identify patients having a calcium citrate ratio greater 0.25 This group of patients radiology reports (CT scans, Ultrasound scan and Plain X-Ray KUB), case notes, clinic letters were accessed to see if they had severe lithogenesis. **Results** The case notes of 161 individuals were analysed for this study, urine metabolic screen data was available for 103 patients who were included in the study. All the 103 patients had a calcium citrate ratio greater than 0.25 The ratio varied from 0.278 to 11.70732 From the group of 103 patients, seventy two (69.90%) patients had severe lithiasis and thirty one (30.09%) patients had renal calculi which did not fulfil the criteria to be called severe lithiasis. Out of the 72 patients with severe lithiasis, 20 (26.6%) had a unilateral renal stone more than 2 cm in maximum diameter, 10 (13.33%) had unilateral stones with a cumulative diameter of more than 2 cms, 26 (34.66%) had bilateral stones with a cumulative diameter of more than 2 cms, 12 (16%) had two recurrent episodes of renal stones in a year and 7 (9.33%) had three or more episodes of renal stones in three years irrespective of stone size. **Discussion** As shown in this study nearly seven out of ten patients with a urine calcium citrate ratio greater than 0.25 develop severe lithiasis. This is the group that require counselling about lifestyle and dietary modifications to reduce their risk of recurrent stones and its complications.

UMP 04 – 29

Stone density prediction without CT Scan

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Purpose: CT scan is traditionally used to determine the stone density in HU in renal calculus patients undergoing ESWL. Subjecting every patient for CT scan raises the concern regarding radiation exposure and increased cost involved in the procedure. This hazard can be reduced to negligible amount by subjecting them to only one X ray

exposure. **Materials and Methods:** Total of 20 patients were considered for the study, in whom renal calculus was diagnosed using ultrasound examination of abdomen. The stone number, size and associated changes in kidney were noted according to USG. The predetermined stones with assigned HU were kept along with the patient and X ray KUB region was taken so as to include external calculi also. Based on visual similarity in radio opacity with the reference stone, density of the renal calculus in patient was predicted. HU of renal calculus was confirmed later by CT scan KUB. **Results:** This study consisted of total 20 patients undergoing ESWL. Out of 20 patients studied, positive prediction of stone density in HU using X ray KUB was possible in 12 patients, accounting for 60% accuracy. **Conclusion:** Density of the stone can be fairly predicted after visually comparing with the calculus, whose HU is predetermined using CT scan. Hence, this method helps us to greatly reduce the radiation exposure of patients by avoiding CT scan. This also helps to reduce the cost involved in treatment.

UMP 04 – 30

A rare case of herpes zoster reactivation after extracorporeal shockwave lithotripsy

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Introduction: Herpes zoster is a reactivated varicella-zoster virus (VZV) infection of the sensory nerve ganglion and the peripheral nerve/its branches. The disease manifests as painful cutaneous eruptions over a single dermatome or two or more contiguous dermatomes; they are invariably unilateral and do not cross the midline. These eruptions are most commonly distributed on the thorax but can appear anywhere on the body. There are many risk factors for reactivation of VZV including mechanical trauma to the nervous system. We are presenting a rare case of herpes zoster reactivation after Extra Corporeal Shockwave Lithotripsy (ESWL). **Case Report:** A 63 year-old male patient presented with a 2-month history of pain in right flank region. Radiological studies showed 1.2 cm calculus right kidney. The patient underwent right sided ESWL. One week later the patient presented with multiple vesicular eruptions distributed along the dermatome of 11th subcostal nerve with pruritus and severe burning pain on his right subcostal margin. The patient had a past history of herpes zoster infection at the age of 32 years in the same skin area. The diagnosis of reactivation of herpes zoster was made by Dermatologist, confirmed by biopsy and Tzanck smear examination. The patient was treated with acyclovir and the lesions healed. **Conclusions:** Reactivation of herpes zoster lesions after ESWL has not been reported in literature so far. However similar lesions namely zosteriform Lichen Planus lesions have been reported earlier.

UMP 04 – 31

Laparoscopic ureterolithotomy with intracorporeal flexible ureteroscopy for uretric and renal pelvic calculus

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Introduction and Objective: Calculus disease is a common scenario. recent advances in endourology and laparoscopy has shown excellent results. one patient presented to us with complaints of right flank pain, on evaluation was diagnosed to have 10 mm renal pelvic and 2.5 cm mid ureteric calculus. **Methods:** Patient underwent laparoscopic ureterolithotomy for mis ureteric calculus, flexible ureteroscope was then introduced through the 5 mm port via access sheath into the ureter, stone was held by dormia basket and removed on toto. **Results:** Patient tolerated the procedure well, took 80 min, 50 ml blood loss, no conversion to open, drain removed 2nd POD, patient discharged after 2 days dj stent removed at 6 weeks. **Conclusion:** This modality of treatment is an excellent option to deal with these situations. complete amramentarium including flexible and rigid scopes is needed.

UMP 04 – 32

Calcified lymph node mimicking ureteric stone: Learning from mistake

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Introduction and Objective: It is a well known fact that calcified lymph node may mimic ureteric stone on plain X-ray. However, it is an extremely rare entity where ultrasonography (USG), intravenous urography (IVU) and contrast enhanced CT scan (CECT) - all three imaging modalities in combination were unable to distinguish a calcified lymph node from ureteric stone. **Methodology:** A 30 years male patient presented with intermittent dull aching pain in lower abdomen without any features of urinary tract infection. USG revealed a large right lower ureteric calculus with mild right hydroureteronephrosis. IVU showed a large calculus in right lower ureter with mild right hydronephrosis. The right ureter was not dilated. Patient was therefore advised CECT KUB, which again confirm the diagnosis. **Results:** The patient was posted for right sided laparoscopic ureterolithotomy. However, in our utter surprise, we could not identify any stone in the lower ureter. Inadvertently, the bladder got opened near right ureteric insertion site. The procedure was converted to open surgery and the bladder injury was repaired. Astonishingly, we found a calcified lymph node in that area, below the right lower ureter. **Conclusion:** It is very important to analysis the status of ureter on imaging in respect to suspected ureteric stone. Whenever there is any confusion, CT urography with 3D reconstruction would be a better option than CECT KUB.

UMP 04 – 33

Vesical calculus with intrauterine copper device as nidus

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Introduction: Foreign bodies in the bladder and ensuing calculus formation around it is an unusual cause for intravesical stone formation. Iatrogenic cause due to intrauterine device (popular and safe method of contraception due to its high efficacy, low risk and low-cost) migration to adjacent organs is a rare one with only a few reports in the medical literature. **Methods:** We report a case of a 39 year old female who presented with chronic urinary symptoms USG, X-ray and CT scan showed the presence of IUCD with calculus. Cystoscopic examination confirmed the diagnosis and allowed removal of the intrauterine contraceptive device and calculus. **Conclusion:** Treatment of foreign bodies is determined by their size, location, shape, and mobility. In most cases, minimally invasive procedures such as endoscopic removal are recommended.

UMP 04 – 34

Variations in colonization pattern of oxalate metabolising bacterial species diversity in hyperoxaluric human subjects

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Purpose of study: Oxalate containing kidney stones are predominant in stone belt area where incidences and recurrence rate are higher including India. Hyperoxaluria due to over production of oxalate: endogenously through systemic metabolic impairment and exogenously by ingestion through diet are leading cause in the disease development. Oxalate have significant impact on human health, as humans do not have enzymes to metabolize oxalate and thus rely on their gut microbiota for maintenance of oxalate homeostasis. In hyperoxaluric patients, gut acts as a primary organ for oxalate excretion, thus, excess of oxalate in gut may leads to selection pressure on composition of gut microbiota in dispersed way. In the present study, we evaluated gut microbiota for the presence of Oxalate Metabolising Bacterial Species (OMBS) and their variation in subjects with recurrent onset of kidney stone. **Methods Used:** Total of 39 subjects (hyperoxaluric = 24 and healthy = 15) were included in the study. 24 h urine and surgically removed kidney stones from affected subjects were used for defining hyperoxaluric condition and stool samples for microbiota analysis. Assessment of microbial composition was done by 16S rRNA gene library preparation and colonization pattern of known OMBS: Oxalobacter formigenes was accessed by PCR based method. Active OMBS were explored for their ability to utilize oxalate by frc-gene-PCR-DGGE analysis. **Results and Conclusion:** Our study revealed lack of oxalate utilizing bacteria, Oxalobacter formigenes, in 83% of the recurrent kidney

stone subjects. In subpopulation analysis, the dysbiosis in gut microbiota with increased proportions of aerobic bacteria was observed and active OMBS were found decreased in disease subjects. OMBS like Oxalobacter may impart the role oxalate metabolism in human gut. Our study finds its application in therapeutic use of such OMBS as probiotics to treat/control the hyperoxaluric condition and recurrent disease onset. **Key-words:** Bacterial diversity, hyperoxaluria, ombs, oxalobacter formigenes

UMP 04 – 35

A giant calculus in ileal conduit after radical cystectomy: A case report

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Introduction: Radical cystectomy with ileal conduit is one of the treatment options for patients with muscle invasive carcinoma bladder. Various long term complications are known for this procedure. But, giant ileal conduit calculus is a very rare complication. Rarity and management problems warrant this presentation. **Case Report:** A 60 years old male had undergone radical cystectomy with ileal conduit about 12 years back. He presented 2 months ago with low urine output through ileal conduit site along with fever, loss of appetite, nausea, painful swelling left flank, bilateral lower limb swelling, breathlessness. On general examination, patient was anemic and febrile. Per abdominal examination revealed normal stomal opening without any evidence of stomal stenosis. Laboratory examination showed hemoglobin 9 gm% with raised WBC count. Renal function test was deranged. Ultrasonography revealed left gross hydroureteronephrosis with perinephric collection. We performed drainage of perinephric collection followed by left sided percutaneous nephrostomy and patient's condition improved gradually. Later on, we performed CECT of abdomen with both oral and intravenous contrast but noncontrast film was not provided so that we missed the calculus. We did nephrostogram which revealed a huge calculus in the ileal conduit. **Conclusion:** Giant ileal conduit calculus is a very uncommon presentation after radical cystectomy and it is probably due to creation of large size conduit that may cause stagnation of urine and formation of calculus.

UMP 04 – 36

Percutaneous extraction of lost/extruded calculi using a nephroscope: A case series

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Introduction: Urinary calculi, which are confined to the collecting system, may be extruded out of the system due to some intervention, either open or endoscopic in an attempt to remove them. These calculi are referred to as lost or extruded calculi. **Methods:** A total of 5 patients presented to us with lost calculi. A CT Urography was done in all 5 to make a diagnosis and confirm the location of the calculus in relation to the other organs. A percutaneous stone extraction was done using a nephroscope in three patients. A retroperitoneal drain was left in situ for 24 hours in all patients. **Results:** In two of our patients open stone removal was attempted whereas in the other three a ureterorenoscopic lithotripsy was tried. Three patients were chosen for surgery based on stone location as assessed on CT. Complete stone clearance was achieved in all patients. One patient developed fever in the post operative period which was managed with antibiotics and antipyretics. No other early complications were noted. All patients were discharged uneventfully on post operative day 3. **Conclusion:** Although lost calculi may be left in place but it leads to significant bother in some patients. Percutaneous extraction of such calculi using a nephroscope provides a minimally invasive technique with a low complication rate for the bothered patient.

UMP 04 – 3

Chyluria in crossed fused renal ectopia: A rare clinical manifestation

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Introduction and Objectives: Crossed fused renal ectopia is the second most common fusion anomaly of kidney after horseshoe kidney with an estimated incidence of 1:1000-1:7500, more common in males (2:1) and left-to-right ectopia is three times more common than right-to-left ectopia. Chyluria is rarely reported with crossed fused ectopic kidneys. **Methods:** A 35 year old average built man had intermittent left flank pain with passage of milky urine for 1 year which aggravated after taking fatty meals. Urine for chyle was positive with sterile urine culture and normal blood tests. Ultrasonography and intravenous urography showed L-type crossed fused right renal ectopia with mid-ureteric calculus in the crossed right ureter. Contrast enhanced computed tomography of kidney, ureter and urinary bladder revealed right crossed ectopic kidney fused by its upper pole to the lower pole of left kidney (L-type). Right crossed ureter contained 17 mm calculus in mid ureter just in front of sacral promontory causing severe hydronephrosis. Cystoscopy showed spurt of chylous efflux from left ureteric orifice. Retrograde pyelography revealed right crossed ectopic kidney fused at its upper pole to left kidney at its lower pole with right crossed ureter having a large calculus at its middle one third. **Results:** Pt was managed with left ureteric catheter placement at the renal pelvis followed by instillation of 1% silver nitrate under strict aseptic conditions. Chyluria subsided after sclerosant therapy. Right ureteroscopic stone removal was attempted but rigid ureteroscope (available in our institute) could not be negotiated through the right ureter and hence open ureterolithotomy was done. Patient recovered well and there was no evidence of relapse during the follow up. **Conclusions:** We report a unique and rare case of stone with chyluria in crossed fused ectopic kidney that was successfully managed with open ureterolithotomy and renal pelvic instillation of 1% silver nitrate. Due to the paucity of literature on this particular clinical condition, there is a need for a consensus regarding the appropriate management of such uncommonly encountered entity.

VIDEO STATIONS

VS – 01

Laparoscopic pyeloplasty in a duplex moiety lower pole UPJO

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Introduction: Duplex kidney is frequently associated with other urinary tract anomalies like ectopic ureter and ureterocele, and rarely associated with UPJO (2%). Here is presented a video of Laparoscopic Dismembered Pyeloplasty for Lower moiety UPJO due to crossing vessel. **Materials and Methods:** 17 year old adolescent presented with left flank pain of 1 yr duration. USG, CT-IVU revealed bilateral duplex system with left lower pole UPJO. Renogram revealed decreased differential function in left lower pole. Retrograde pyelography followed by 4-port Laparoscopic Transperitoneal Dismembered Pyeloplasty was performed. **Results:** operative time was 3 hours. post operative course uneventful. Length of hospital stay was 4 days. At 3 month followup, patient had no symptoms and USG revealed resolution of hydronephrosis. **Conclusion:** Reconstruction of duplex UPJO depends on the type as well as the level of duplication. Laparoscopic dismembered pyeloplasty is a feasible and promising approach to Duplex UPJO, analogous to single system UPJO.

VS – 02

Transperitoneal laparoscopic pyeloplasty for pelviureteric junction obstruction in a horseshoe kidney

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Introduction and Objective: Horseshoe kidney is an uncommon renal anomaly often associated with pelviureteric junction (PUJ) obstruction. Since first being introduced in 1993, laparoscopic pyeloplasty has become the gold standard for the treatment of PUJ obstruction in heterotopic kidney with success rate of >90%. However, there are only few reports of laparoscopic pyeloplasty in a horseshoe kidney. We are presenting our technique of transperitoneal laparoscopic pyeloplasty for PUJ obstruction in a horseshoe kidney. **Methods:** 21 year old female patient presented with right lower abdomen pain for 1 year. USG abdomen and CT urogram

revealed horseshoe kidney with right hydronephrosis secondary to PUJ obstruction. DTPA renogram showed obstructive drainage pattern in right kidney with split function of 39.2% on right side and 60.8% on left side. Patient underwent transperitoneal laparoscopic Anderson hyne's pyeloplasty with transposition anterior to lower pole crossing vessels. Intraoperative and postoperative findings were recorded. Patient was followed up at regular interval with USG and DTPA renogram. **Results:** Procedure was successfully completed with laparoscopic approach. Duration of surgery was 170 minutes, blood loss was minimal, and there were no intraoperative and postoperative complications. Oral feeds started on postop day 1, catheter and drain were removed on postop day 2 and discharged on postop day 3. Double J stent was removed after 6 weeks. Patient has completed 12 months of follow up and is clinically asymptomatic. Follow up DTPA renogram showed non obstructive drainage pattern in the affected renal unit with preserved renal function. **Conclusion:** Laparoscopic pyeloplasty in horseshoe kidney is feasible despite renal and vascular anomaly. It offers successful outcome with reduced postoperative morbidity and early recovery.

VS – 03

Calyceal diverticulum of kidney: Diagnostic dilemma

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Background: Calyceal diverticula can mimic renal cystic lesions and correct diagnosis can be difficult to establish. Connection between fluid collection and collecting system confirmed by imaging studies is the key diagnostic finding. we present a video demonstration of percutaneous nephrolithotomy and infundibulotomy in a patient with calyceal diverticular calculi. **Case Report:** A young female patient presented with right loin pain, fever and previous Rt ESWL – 15 yr back. Ultrasound was suggestive of renal cyst with wall calcification. CT urogram was done and diagnosis of mid pole clayectasis/calyceal diverticulum was made. On the table retrograde pyelogram and flexible ureteroscope could not demonstrate any communication between calyx and diverticula. On percutaneous puncture of diverticulum, multiple secondary calculi were seen. A pin hole communication between calyceal diverticulum and the infundibulum was noted. PCNL was made out and infundibulotomy done using Holmium Laser and DJ stent placed across the infundibulotomy. Post-operative period was uneventful and patient recovered well. **Conclusion:** This report suggests that there will be diagnostic dilemma in diagnosing calyceal diverticulum and complete work up with high index of suspicion will diagnose calyceal diverticulum

VS – 04

Cystoscopic light assisted mucosa sparing laparoscopic urachal cyst excision

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Introduction: The urachus is the embryological remnant of the allantois, that connects the fetal bladder to the umbilicus. It usually obliterates in the fifth month of gestation giving rise to median umbilical ligament. Several types of urachal anomalies have been described including urachal cyst, patent urachus, diverticulum and sinus. Symptomatic urachal cysts may require intervention. An open or Laparoscopic approach may be employed for excision of the cyst. Laparoscopic approach involves complete removal of the urachal cyst with or without a cuff of bladder tissue. We describe a novel, cystoscopic light assisted, bladder mucosa sparing laparoscopic excision of the urachal cyst. **Materials and Methods:** A 24-year-old girl presented with lower midline abdominal swelling which on MRI scan was diagnosed to be a 6.2 x 4.5 cm urachal cyst located just superior to the bladder. Management options were discussed with the patient and she elected for laparoscopic excision of the urachal cyst. Cystoscopy was carried out to visualize the demarcation between the cyst and the bladder wall with the help of cystoscopic light. This video demonstrates the techniques. **Results:** The duration of surgery was 150 minutes. Total blood loss was 50 ml. The foley catheter was removed after 24 hours. patient was discharged on POD2. Patient is asymptomatic in one year of follow up. **Conclusions:** Cystoscopic light assisted mucosa sparing laparoscopic urachal cyst excision

is a novel minimally invasive technique. Since the bladder is not opened, the mucosa sparing approach allows for early catheter removal potentially reducing morbidity.

VS – 05

Feasibility of laparoscopic partial nephrectomy without intraoperative ultrasound guidance

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Introduction and Objective: Partial nephrectomy is currently the treatment of choice for clinical T1 renal masses. Laparoscopic partial nephrectomy has emerged as an excellent alternative to open partial nephrectomy, offering the same level of oncologic efficacy with reduced morbidity. Intraoperative ultrasound is considered essential while performing partial nephrectomy, to accurately judge the depth of tumor and to rule out satellite lesions. We are presenting a video to demonstrate that in selected cases, laparoscopic partial nephrectomy may be performed safely and effectively without the use of intraoperative ultrasound. **Methods:** A 35 year old female presented to our department with an incidentally detected left renal mass (clinical T1a). She underwent a laparoscopic left sided partial nephrectomy. Her case file and intraoperative video was recorded and is being presented. **Results:** The patient successfully underwent laparoscopic partial nephrectomy without any complications. She had an uneventful postoperative course. The histopathology showed papillary renal cell carcinoma type 1 with a negative resected margin. **Conclusion:** Laparoscopic partial nephrectomy may be performed safely and effectively without using intraoperative ultrasound in selected patients with predominantly exophytic tumors. It achieves equivalent cancer control as open surgery, with less morbidity. For predominantly endophytic tumors, intraoperative ultrasound may be mandatory.

VS – 06

L-shaped crossed fused ectopia with non functioning orthotopic moiety due to calculus disease

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Introduction: L shaped fused ectopic kidney is a rare variant of crossed fused renal ectopia (CFRE). It is often discovered incidentally. Symptomatic presentation may be with abdominal pain, urinary tract infection, renal calculi, asymptomatic renal mass and hypertension. The culprit is likely to be an underlying abnormality in the ectopic kidney as the orthotopic kidney is usually normal. Calculi formation is a common complication in ectopic kidneys due to abnormal position of pelviureteric junction, aberrant vasculature and isthmus with resultant urinary stasis. We present a rare case of CFRE with non functioning orthotopic moiety due to calculus disease. **Case Report:** A 12 year old boy presented with dull aching left flank pain and intermittent hematuria for three months. Clinical examination was unremarkable. CT urography and DTPA scan revealed crossed fused renal ectopia on the left side with a non functioning hydronephrotic orthotopic moiety due to a left renal pelvic calculus. The heterotopic right kidney fused to the left kidney was normal. CT angiography showed a single left renal artery arising from the aorta and a single right renal artery arising from right common iliac. The venous drainage was by a retro aortic common venous channel arising from IVC and coursing between the two common iliacs with division into right and left renal veins. Patient underwent laparoscopic transperitoneal heminephrectomy. Vessels supplying the right kidney were carefully preserved and early left renal artery ligation and consequent discolouration of the left kidney allowed for an accurate margin along which sectioning was done using a combination of harmonic scalpel and monopolar cautery. **Conclusion:** To the best of our knowledge, this is the first case of a crossed fused renal ectopia with non functioning orthotopic moiety due to calculus disease and its management by laparoscopic heminephrectomy.

VS – 07

Percutaneous nephrolithotomy through superior calyceal access: Our experience of 90 cases

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Introduction and Objective: Percutaneous nephrolithotomy through superior calyceal access has been shown to be the most suitable approach for staghorn calculi, calculi in the upper ureter, and complex inferior calyceal calculi. The aim of this study was to evaluate the safety and efficacy of the superior calyceal access. **Materials and Methods:** Between 2010 and 2015, 90 patients underwent PCNL through superior calyceal access. Demography, BMI, Laterality, Stone burden, Stone location & complexity, Number of tracts, Supra/infracostal access and post operatively any ancillary procedures, Stone clearance rate and Complications were assessed. Post operative care & Follow up was with Chest X-ray, Analgesics on demand, Discharge after 24-48 hrs, X-ray KUB before discharge, USG/X-ray \pm CT-KUB after 1 & 3 months. **Results:** Out of 90 pts, 67 were male & 23 were female, 46 on right side and 34 on left side. Upper and lower calyceal stones, Partial staghorn, Malrotated kidney with bifid pelvis, Stones in upper calyceal diverticulum were treated. Stone distribution was solitary (54), multiple (32) and staghorn (4). Mean age, BMI, stone burden, operative time, hospital stay & drop in hb was 44.5 ± 5 yrs, 23 ± 4.7 kg/m², 2.0 ± 0.8 cm, 2.5 days, 1.2 ± 0.6 gm respectively. SC access only - 79.5%, accessory tracts through middle/lower calyx 16.4%, two or more tracts 4.1%. supra 12th, 11th and infra 12th were 50, 3 & 47% respectively. 90% pts were tubeless (only dj) and 10% were totally tubeless. Stone free rate was 97% and 3% had Clinically insignificant residual fragments. Hydropneumothorax requiring ICD, fever, ileus, in 4, 3, & 2 patients respectively. None of pts needed blood transfusion. Except those patients who had complications, all other patient recovered uneventfully. **Conclusions:** Superior calyx access gives direct access to almost all calyces, ease of access to the upper ureter, Less torque-minimal bleeding, Good clearance, and no increased risk of complication.

VS – 08

Primary Endoscopic Realignment of Rupture Urethra

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Introduction and Objective: Pelvic fracture urethral injury (PFUI) is more common in India. There are two schools of thoughts for its management. a. Initial supra-pubic catheterization (SPC) followed by reconstruction of resultant stricture b. Realignment of urethra We demonstrate method of primary endoscopic realignment of rupture urethra and review the literature comparing these two procedures. **Materials and Methods:** A 45/M-presented with retention of urine and bleeding per urethra due to crushing pelvic trauma. After initial resuscitation he had X ray pelvis, CT abdomen, RGU. He then underwent SPC under ultrasound guidance. On 17th day after SPC he underwent primary endoscopic realignment of the rupture urethra. **Results:** We used a two endoscopes technique one each from the SPC route and per-urethral route. Intra-operative contrast study and methylene blue study were done to see extent of injury, possible patency and continuity of the urethra. A PTFE guide wire (GW) was passed from below. At the first site of the GW, it was carefully pulled in suprapubically. A silicon Foley catheter (14 F) was gently passed perurethrally over it. The position of catheter was confirmed suprapubically. Catheter was removed after 6 weeks. Patient voided well without any complication. At one year follow up patient is asymptomatic and unobstructed. These results correlated well with other studies. **Conclusion:** 1. Appropriate instrumentation is required. 2. Low risk and low complication rate. 3. Adequate experience is essential. 4. Level 3 evidence in favor of this approach over SPC alone and subsequent urethroplasty.

VS – 09

Total laparoscopic management of renal hydatiduria

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Introduction: Renal involvement is found in 2-4% of all cases of hydatid disease and isolated primary renal involvement is even more rare. Hydatiduria is present in only 10-20% of all cases of renal hydatidosis. Surgical treatment options include closed total cystectomy, partial pericystectomy, marsupialization, capitonage with/without omentoplasty, deroofting with endocyst removal and partial/total nephrectomy. We are presenting a rare

case of left lower pole renal hydatid cyst communicating to pelvi-calyceal system (PCS) managed by laparoscopy. Methods: A 45 year old male presented with history of dull aching left flank pain and intermittent passage of small pearly white grape like structure for 6 months. Local and systemic examination were unremarkable. USG KUB suggestive of multiloculated cyst in lower pole of left kidney which was confirmed on CT urography as 7 x 6 cm partially exophytic nonenhancing hydatid cyst with daughter cysts and calcifications along the wall. Hydatid serology & casoni tests were positive. Patient was planned for laparoscopic renal hydatid cyst excision. Intraoperatively communication of cyst with pelvi-calyceal system was found, that was also managed laparoscopically. Surgical technique is demonstrated in the video. Results: Duration of surgery 150 minutes. Total blood loss 70 ml. Foley catheter removed at POD2. Drain was removed on POD3 & patient was discharged. Tab albendazole 400 mg BD was given for 2 weeks. DJ stent was removed after 4 weeks. No recurrence detected on abdominal CT scan after 1 year follow up. Conclusion: Laparoscopic treatment of renal hydatid cyst is feasible, safe and can be used even for management of renal hydatid disease communicating to PCS. Maximum preservation of renal parenchyma should be done as renal hydatid disease is a benign disorder.

VS – 10

Laparoscopic pyelotomy and laser lithotripsy in crossed fused ectopic kidney

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This video demonstrates laparoscopic pyelotomy and laser lithotripsy for a stone in crossed fused ectopic kidney, where an earlier approach through retrograde intrarenal surgery (RIRS) had failed due to narrow pelvi-ureteric junction.

VS – 11

Robotic ureteronephrectomy: Raising questions, seeking answers!

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Introduction and Objective: Upper tract Transitional cell carcinoma (TCC) accounts for only 5% of all urothelial tumors. Radical nephroureterectomy (RNU) remains the procedure of choice. It's an aggressive disease with high local and bladder recurrence. Handling the lower ureter has been open to debate. We describe one such modification of handling the lower ureter first followed by nephrectomy. Materials and Methods: A 71 year female presented with painless hematuria. CT Urography revealed a soft tissue mass in left distal ureter. Ureteroscopic biopsy was high grade urothelial carcinoma. We hypothesized that would oncological efficacy be better if lower end is handled first with lymphadenectomy? In an era of accurate CT scan staging is a nephrectomy first approach mandatory? Patient underwent left RUN with extended pelvic lymphadenectomy. Initially bladder mucosa was scored cystoscopically and then through standard robotic prostatectomy ports left lower ureter was dissected, clipped and bladder was closed. Robot was redocked in kidney position and nephrectomy culminated. Results: Drain was removed on POD 2 and Foley's catheter on POD 3. Hospital stay was 4 days. Final HPE showed high grade invasive urothelial carcinoma pT2 pN0. Conclusions: Early clipping of lower ureter may minimize the risk of tumor seeding resulting from manipulation of kidney. Lymphadenectomy first approach may be oncologically sound. Among different methods of handling distal ureter fundamental oncological concepts should be adhered. We raise questions and seek answers by invoking a thought process of ureter first approach.

VS – 12

Modified blandy's technique for bipolar trans urethral resection of prostate (TURP) for large prostate with median lobe

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Introduction: The management of very large prostate glands (i.e. >100 cc) is a special challenge. Various techniques from simple (open, laparoscopic, robotic) prostatectomy to monopolar TURP, staged TURP, HoLEP, bipolar TURP and bipolar enucleation have been used. We describe our Modified Blandy's technique for bipolar saline TURP for large prostate with median lobe. With this technique, by taking care of blood supply initially at the capsular level, lobes of prostate are systematically resected with faster speed and lesser bleeding. Materials and Methods: Index patient a 66 year male was a case of failed medical therapy for BPH. His prostate size on USG was 130 cc with large median lobe. Resection is started at 5 o'clock position by creating a trough upto the verumontanum and then a trough at 7 o'clock followed by resection of median lobe. After resecting tissue at 12 o'clock a trough is created at 1 o'clock position upto the capsule and left lobe is resected. It is followed by the same at 11 o'clock and right lobe is resected. Residual tissue left is shaved off and completed hemostasis achieved. Results: Resection time was 60 minutes, 39 litres saline was used and dry weight of resected tissue was 75 grams. Change in hemoglobin and serum sodium was 0.8 g/dl and 2 meq/l respectively. Catheter was removed on POD 2. Conclusions: Bipolar TURP by Modified Blandy's technique is a safe and feasible option for patients with large prostatic adenomas.

VS – 13

Video on Laparoscopic partial nephrectomy, excision of adrenal nodule and interaortocaval lymph node

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Introduction and Objectives: Laparoscopic partial nephrectomy is being increasing used for T1a and select T1b tumors with similar oncologic outcomes. Presence of adrenal nodule and interaortocaval lymph node could influence the surgical approach. We present a video demonstrating laparoscopic partial nephrectomy, excision of adrenal nodule and interaortocaval lymph node. Methods: 41-year-old lady was incidentally detected to have right renal lower pole mass. She had no known co morbid illness. Her preoperative evaluation was within normal limits. CECT showed 4 x 3 x 3 cm, exophytic, well-defined, enhancing right renal lower pole mass; 2 x 2 cm, homogenous, hypodense, right adrenal nodule and 1.5 x 1 cm interaortocaval lymph node. She underwent an uneventful laparoscopic partial nephrectomy, excision of right adrenal nodule and interaortocaval lymph node. Following application of vascular clamps across the renal hilum, tumor was excised with a margin and hemostatic sutures were taken. Excision of adrenal adenoma and interaortocaval lymph node was done. Results: The duration of operation was 1 hour 30 minutes with a warm ischemia time of 18 minutes. She had an uneventful post-operative recovery. There was no blood transfusion. Histopathology report showed renal cell carcinoma (clear cell), Fuhrman type 1-2, with negative margins; adrenal adenoma and reactive change in the interaortocaval lymph node. Conclusions: Small renal masses with adrenal nodule and enlarged interaortocaval lymph node can be safely managed laparoscopically.

VS – 14

Laparoscopic assisted anterior exenteration with pelvic lymphadenectomy and ileal conduit for muscle invasive carcinoma bladder

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Introduction: Laparoscopic Assisted Anterior Exenteration with Pelvic Lymphadenectomy and Ileal conduit for Muscle Invasive Carcinoma Bladder addressing the oncologic outcome, haemorrhage and risk to open conversion Methods: From July 2013 to July 2015, 3 cases of Laparoscopic Assisted Anterior Exenteration with Pelvic Lymphadenectomy and Ileal conduit for Muscle Invasive Carcinoma Bladder were performed and reviewed prospectively. One patient was a Post Radiation Therapy Failure for Salvage Cystectomy. Operative time, total blood loss, complications, operative conversions, oncologic outcomes were analyzed Results: Average operative time for the complete procedure was 430 minutes, total blood loss 350 ml, 2 out of the 3 procedure were completed laparoscopically but one

case had to be converted due to hemorrhage from the vaginal veins. In all the 3 cases ileal conduit were prepared through a small midline incision. The oncologic outcomes of all the three procedures were safe and equivalent in terms of lymph node retrieval and margins. Conclusion: Laparoscopic Assisted Anterior Exenteration with Pelvic Lymphadenectomy and Ileal conduit for Muscle Invasive Carcinoma Bladder is safe procedure with good oncologic outcomes.

VS – 15

High burden radical cystectomy (> 10 cm): Is laparoscopy feasible?

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Introduction: Laparoscopy is effective modality for performing radical cystectomy and lymph node dissection. It is indicated for non-bulky bladder malignancy. **Objective:** To evaluate the feasibility of LRC in bulky bladder masses. **Materials and Methods:** We demonstrate representative case of LRC, lymph node dissection in a 56 year old gentleman presenting with cT3b, Nx bladder mass of size 11 cm. Case specific changes were additional port placement for lifting the bladder mass anteriorly by assistant to expose the posterior dissection, using 30 degree upward direction laparoscope for dissecting seminal vesicle and prostate, freeing the specimen before ligature fixing of dorsal vein complex and facilitating node dissection after cystectomy. **Results:** We have done LRC in 4 cases of High burden bladder masses. The mean operative time was 252 ± 54 minutes, estimated blood loss of 250 ml and no requirement of blood transfusion. There was no post-operative complication with mean hemoglobin drop of 1.5 ± 0.67 gm% and hospital stay of 6 days. The final histo-pathologic result was bladder mass weighing 493 grams, size of 11 x 11 x 8 cms, transitional cell carcinoma pT3aN1 (1 of 42 nodes). **Conclusion:** We demonstrated the feasibility of high burden cystectomy with laparoscopy. The procedure maintains minimally invasive advantage without compromising oncological outcome.

VS – 16

Robot assisted extended anterior pyelolithotomy for staghorn stone

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The management of a large staghorn stone can be challenging. PCNL is the procedure of choice for large burden stones, especially staghorn calculi. PCNL, though being minimally invasive procedure has inherent complications owing to the need for transgressing the renal parenchyma, difficulty in access due to lesser degrees of hydronephrosis and packed calculi, prolonged operative time, multiple punctures/tracks, supracostal access, stone fragmentation with risk of sepsis and residual fragments and need for additional procedures. Robotic assistance has made it technically feasible to perform an Extended Pyelolithotomy in a manner similar to that performed during open Extended Pyelolithotomy. It provides all the inherent benefits of the open procedure as it avoids renal parenchymal transgression, especially when dealing with staghorn stone. We present a video of a 41 year male who presented with Rt. flank pain of 5 yr. duration; on evaluation was found to have a large Rt. staghorn stone and recently underwent Robot Assisted Extended Pyelolithotomy by anterior approach at our centre. The post-operative period was uneventful. Robotic Assisted Extended Pyelolithotomy appears to be a safe and feasible minimally invasive management option in carefully selected patients of large staghorn renal calculi in experienced hands.

VS – 17

An unusual cause of vesico-vaginal fistula

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49 year p212 LCB 10 years underwent vaginal hysterectomy for prolapse uterus in august 2014 elsewhere. Presented to us with c/o white discharge per vaginum for 2 months and involuntary leak of urine for a week. Local

examination revealed catheter in situ with clear urine and minimal leak from vagina. Ultrasound revealed a bladder mass. CT revealed a curvilinear metallic dense lesion in left lateral bladder. Cystoscopy revealed a surprise which was resected and removed. The leak stopped postoperatively. This video is presented to show this rare cause of vvf managed endoscopically.

VS – 18

Laparoscopic nephroureterectomy for upper tract TCC: A comparison between pure lap nephroureterectomy and lap nephrectomy with open ureterectomy

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Introduction: Upper tract transitional cell carcinoma (TCC) accounts for 5-7% of renal tumours. Standard treatment for Upper tract TCC is Nephroureterectomy with bladder cuff excision. Laparoscopic Nephroureterectomy is reported to be equivalent to open nephroureterectomy, though controversy still exists regarding distal ureteral and bladder cuff management. **OBJECTIVES:** To establish feasibility and compare Pure Laparoscopic Nephroureterectomy (PLNU) with Laparoscopic nephrectomy and Open ureterectomy (LNU). **Materials and Methods:** 31 patients with Upper tract Transitional cell carcinoma underwent PLNU (n = 11) or LNU (n = 20). Data was retrospectively analysed from prospectively maintained database. Operative time, estimated blood loss, completeness of resection, post operative pain, analgesia requirement and hospital stay were analysed. Patients were followed and oncological outcome monitored. **Results:** Patients' demographics and tumour characteristics were comparable. Operative time, estimated blood loss and hospital stay was 158 minutes, 190 ml, 3.1 days and 189 minutes, 260 ml and 3.5 days, respectively. Total scar length, post operative VAS score and mean analgesic requirements (7 cm, 4, 75 mg vs 15.5 cm, 7, 160 mg) were significantly lower in Pure LNU group. No significant difference in the complication rates was observed. On median follow up of 38 months (5-64), no difference was observed with respect to bladder recurrence (27.3% vs 30%), local recurrence (9.1% vs 10%) or distant metastases (9.1% vs 15%) **Conclusion:** PLNU is safe, feasible and equally effective alternative to Laparoscopic nephroureterectomy with open ureterectomy. It has advantages of less post operative pain and shorter scar length.

VS – 19

Laparoscopic repair of inferior vena cava rent: Intra-operative injuries do not always need conversion

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Introduction and Objective: Vascular injuries during laparoscopic surgery are a well known complication and often a cause for conversion to open surgery. We present a video of bleeding from a slipped clip on an IVC branch during laparoscopic adrenalectomy for a 15 cm tumor that was successfully managed laparoscopically. **Methods:** A 72 year old hypertensive male presented with dull aching right flank pain of 6 month duration and on evaluation was found to have a 15 cm right adrenal myelolipoma with chronic cholecystitis. A transperitoneal adrenalectomy was planned in the modified left lateral position. 4 ports were placed. After separation of the specimen and hemostasis, while attempting to place the specimen in a retrieval bag, a clip on tributary of the IVC was dislodged, leading to torrential bleeding. The breach was controlled with an atraumatic grasper and a rescue stitch of 4-0 Prolene and bulldog clamps were applied. After achieving control, the rent was repaired with 4-0 prolene suture. Hemostasis was confirmed after reducing intra-abdominal pressure to 5 mmHg for 15 minutes before laparoscopic cholecystectomy was performed. The specimen was then bagged and removed. **Results:** The operative time was 5 hours including cholecystectomy time and blood loss was 600 ml. He discharged on post operative day 4. Histopathology confirmed it to be myelolipoma and he is currently on follow up. **Conclusion:** Bleeding from the IVC is a rare but challenging complication during laparoscopic right adrenalectomy. With experience, these problems can be managed without conversion to open surgery.

VS – 20

Laparoscopic Heminephrectomy in a pyonephrotic horseshoe kidney

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Introduction: Horseshoe kidney (HSK) is the most common fusion anomaly of kidney. Pelviureteric junction obstruction (PUJO) occurs in less than 20% of individuals with HSK. Obstructed non functioning moiety may get complicated with pyonephrosis. Laparoscopic heminephrectomy (LHN) in a HSK can be technically challenging procedure due to abnormal anatomical location, aberrant vasculature, and the isthmus. It needs special consideration in view its blood supply, functioning parenchyma and extension of collecting system. The recurrent infections in a hydronephrotic

sac lead to perinephric adhesions and add to the intricacy. We describe surgical technique of LHN in a pyonephrotic HSK. **Patients and Methods:** 25 year old unmarried female presented with left flank pain with low grade fever. On evaluation with multiphasic computerised tomography and DTPA scan; she was found to have HSK with non functioning hydronephrotic left moiety with pyonephrosis. Left LHN was performed and key-steps were; bilateral ureteric catheterization, bilateral retrograde pyelography, caudad placement of ports, meticulous vascular dissection of aberrant vasculature, stapler firing over the isthmus. **Results:** Surgery went uneventful and total laparoscopy console time of 40 min and blood loss of less than 50 ml. At 6 months follow up patient has a stable renal function. **Conclusion:** With advancing learning curves, LHN in a pyonephrotic HSK moiety is feasible thus advancing the goal post in minimally invasive urology. Precise operative strategy and strict adherence to the key-steps as above help minimize complications even in a pyonephrotic kidney with ill defined surgical planes.